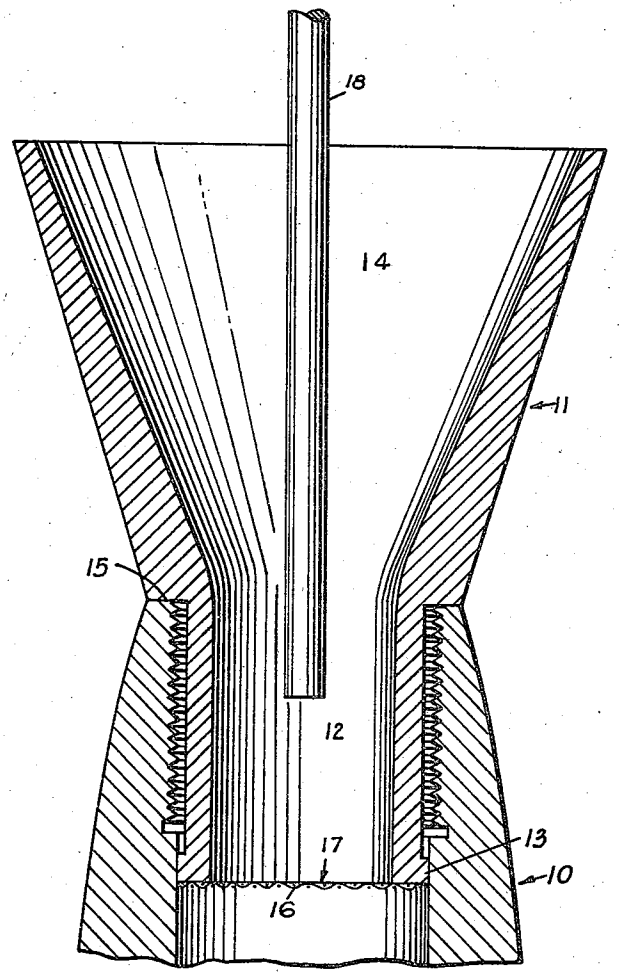
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FUSE WELL FORMING POUR FUNNEL

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FUSE WELL FORMING POUR FUNNEL

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2 Claims. (Cl. 86—31)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to apparatus for filling an explosive container with explosive and forming the booster cavity or fuse well therein.

It is an object of the invention to provide an exceedingly simple and safe apparatus for filling containers with explosives, such as shells and bombs, that is adapted to accomplish both the filling and booster or fuse well forming steps in one operation instead of the usual two operations employed to attain this result as generally practiced in the art.

The specific nature of the invention as well as other objects and advantages thereof will clearly appear from a description of a preferred embodiment as shown in the accompanying drawing in which:

The single view constituting the drawing shows in longitudinal section the filling apparatus of this invention as used in filling an explosive shell.

Referring to the drawing by characters of reference there is shown in longitudinal section one conventional type of high explosive container indicated at 10 with the fuse well or booster cavity forming pour funnel of this invention also shown in longitudinal section and disposed in operative filling and fuse well or booster cavity forming relation with respect to the container 10 as generally indicated at 11. While the form of the container 10 is herein shown to be a shell it will of course be obvious that the adaptation of the funnel is not limited to any particular container, but may be used in filling any explosives container where a fuse well or booster cavity is desired.

The funnel 11 comprises a cylindrical tubular adapter portion 12 provided at its lower end portion with an outwardly extending annular flange 13 adapted to be received within the mouth of the shell or container 10 in close proximity to the interior walls of the container and a funnel portion 14 suitably secured to the upper end portion of the cylindrical adapter portion in any desired manner to form the annular seat 15.

The lower ends of the tubular adapter portion 12 and annular flange 13 are disposed in substantially the same horizontal plane and a suitable screen 16 is secured thereover for a purpose hereinafter made apparent.

The depth of the adapter portion 12 from the seat 15 to the screen 16 will vary with the depth of the fuse well or booster cavity desired.

In the operation of filling a shell or other container with explosives the funnel 11 is arranged with its adapter portion 12 disposed within the mouth of the container 10 in supported relation by interengagement of the nose of the container and seat 15 of the funnel as shown in the drawing. With the funnel 11 and container 10 at room temperature, molten explosive, such as TNT, is poured within the container through the funnel and freezes in the plane of the lower end of flange 13 as indicated at 17 thus preventing the explosive from entering the space between the exterior of the tubular portion 12 of the funnel and adjacent portion of the interior wall of the container, which keeps the threads and other machined surfaces within this space clear of explosives. By providing the funnel 11 with the screen 16 and stirring or agitating the explosive by a stirring or break down rod 18 as it is poured into the container 10 it has been found that the heat dissipated from the explosive will suffice to cause the explosive to sufficiently set or freeze so that when the funnel is removed from the container, the break in the explosive across the plane of the screen 16 will be clean and normal to the longitudinal axis of the container whereby drilling for the fuse well or booster cavity as now extensively practiced in the art will be wholly eliminated.

Having now described what is at present considered a preferred embodiment of the invention I claim:

1. In a fuse well or booster cavity forming pour funnel in combination, an adapter portion provided with an outwardly extending flange at its lower end, a funnel portion secured to the upper end of the adapter portion forming an exterior seat adjacent the junction thereof, and a screen secured across the lower ends of the flange and adapter portion.

2. In a fuse well or booster cavity forming pour funnel in combination, a cylindrical tubular adapter portion provided with an outwardly extending annular flange at its lower end, a funnel portion secured to the upper end of the adapter portion forming an annular exterior seat adjacent the junction thereof, and a screen secured across the lower face of said flange and adapter portion.

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