

12 **EUROPEAN PATENT APPLICATION**

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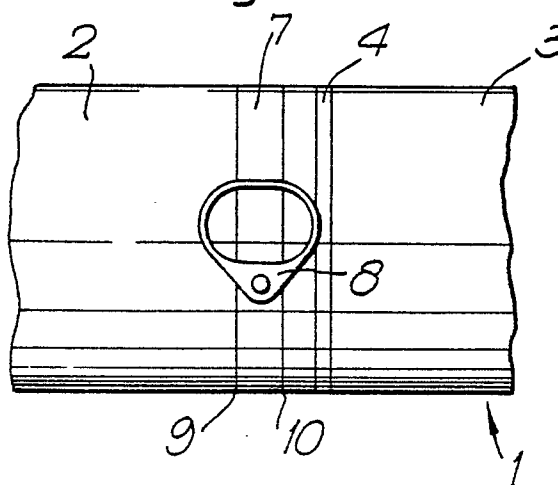
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54 **Containers.**

57 A long term storage container is disclosed in which a hermetic seal is provided making the container weatherproof. A tamperproof opening arrangement is incorporated which indicates whether the container has been opened and which enables the container to be opened without any special tools.

Fig. 3.



CONTAINERS

This invention relates to containers and is intended for the long term storage of objects in particular, though not exclusively, to the long term storage of projectiles.

It is known to use weatherproof containers to transport and store ammunition and projectiles to keep them clean and dry in adverse environmental conditions. Even with containers it is still difficult to prevent the ingress of dirt and moisture through openings around the lid. The present invention provides a sealed container which is completely weatherproof and does not require special tools to open it. In addition it also provides a tamperproof seal which indicates if the container has been opened.

According to the present invention, there is provided a container comprising two elongate portions joined in end to end relationship to define a closed chamber, one portion of the container including a locally weakened circumferential wall region, and manually grippable means for being gripped by an operator and pulled to tear a circumferential strip from said wall region thereby allowing separation of the container into two parts.

Advantageously, said locally weakened circumferential wall region is defined by two circumferential grooves formed in the container wall.

Alternatively, the circumferential grooves may be formed in a further portion attached to said one portion.

Preferably, a recess is formed in one end of said elongate portions and which recess contains resealing means for resealing the container. In the embodiment described, said resealing means comprises self amalgamating tape.

For a better understanding of the invention, reference will now be made, by way of example to the accompanying drawings in which:-

Figure 1 is a plan elevation of a storage container;

Figure 2 is a sectioned side elevation of the storage container of figure 1 showing a projectile in place;

Figure 3 is an enlarged view of the portion of the figure 1 container containing a removable strip; and

Figure 4 is a section on IV-IV of figure 2.

Referring to figures 1 and 3, a storage container 1 is shown and which container comprises two elongate cylindrical portions 2 and 3 joined end to end around their circumference by an electron beam weld 4. Both ends 5 and 6 of the container 1 are crimped and sealed in a similar fashion to a tin can once assembled. A removable strip 7 is provided in the container 1 near to the welded join 4

for opening the container. A ring pull 8 is attached to the strip 7 for ease of removal. The strip 7 is formed by a pair of locally weakened circumferential wall regions 9 and 10 which are shown more clearly in figure 3. The weakening of these wall regions is achieved by scoring the container wall or by forming shallow grooves in the wall. When the ring pull 8 is pulled radially outward from the body of the container, the strip 7 tears along the weakened regions 9 and 10 separating the container into two parts, and therefore allowing items stored within the container to be removed. A handle 11 is provided on the outside of the container 1 for ease of carrying and it is attached to the container 1 by two circumferential bands 12 and 13 which may be in the form of Tyraps. A closable recess 14 is formed in the end 5 of the container for the storage of sealing tape (not shown) for resealing the container if desired to do so once it has been opened. However, a reduced level of sealing is obtained when compared with the level of sealing obtained with the original container.

Referring now to figures 2 and 4, the container 1 has a projectile 20 mounted within it. The projectile 20 is packed in a packing member 21 which totally surrounds it and which includes portions 22 adapted to engage with changes in section 23 of the projectile body. The member 21 fits within the container 1 with a small air gap (not shown) between them. A pair of protective end blocks 24 and 25 are provided at respective ends 5 and 6 to prevent axial movement of the projectile in its packing member within the container 1.

During construction of the container 1 as a projectile storage container, the cylindrical portions 1 and 2 are welded together as previously described and one end 5 is crimped and sealed. The end block 24 is inserted into the container prior to the projectile 20 inside its packing member 21 through the opened end 6. The other end block 25 is positioned inside the container before the end 6 is crimped and sealed. The projectile is then hermetically sealed within the container and can be stored for a number of years before use.

If however, the container is opened by pulling the ring pull 8 and removing the strip 7 and the projectile is not used, a temporary seal can be provided by using the sealing tape stored in the recess 14 of the container. This tape is a self-amalgamating tape and seals to itself and to the container wall and can extend the life of the opened container by around 30 days.

Alternatively, the regions of the container near to the strip 7 may be modified to incorporate a screw thread arrangement which can be engaged to provide a mechanical lock after the removal of the strip, if the container needs to be resealed.

The packing member 21 and the end blocks 24 and 25 can be manufactured from any suitable material, for example, a structural foam, or expanded polypropylene or polyethylene foam which provides the projectile with protection from the effects of shock and insulates it from extremes of temperature.

The removal strip 7 may be formed on a further cylindrical portion which is attached to one of the portions 1 and 2. The container is constructed from stainless steel in preference to other materials for durability and because of the requirements for a long storage life, but other materials could be used for example aluminium. Although the container is shown specifically for storing projectiles it could be used for other more conventional canning applications.

Claims

1. A container comprising two elongate portions joined in end to end relationship to define a closed chamber, one portion of the container including a locally weakened circumferential wall region, and manually grippable means for being gripped by an operator and pulled to tear a circumferential strip from said wall region thereby allowing separation of the container into two parts.

2. A container according to claim 1, wherein said locally weakened circumferential wall region is defined by two circumferential grooves formed in the container wall.

3. A container according to claim 1, wherein said locally weakened circumferential wall region is defined by circumferential grooves formed in a further portion attached to said one end.

4. A container according to any one of the preceding claims, wherein the two elongate portions are joined by electron beam welding.

5. A container according to any one of the preceding claims, wherein the two elongate portions are cylindrical.

6. A container according to any one of claims 1 to 5, wherein a recess is formed in one end of said elongate portions and which recess contains resealing means for resealing the container.

7. A container according to claim 6, wherein said resealing means comprises self amalgamating tape.

8. A container according to any one of claims 1 to 5, wherein said elongate portions include screw thread regions which are engaged to the container.

9. A container according to any one of the preceding claims, wherein a projectile is mounted within the container and is hermetically sealed within it prior to opening.

10. A container according to claim 9, wherein packing and insulating means are provided to protect the projectile from the effects of shock and temperature.

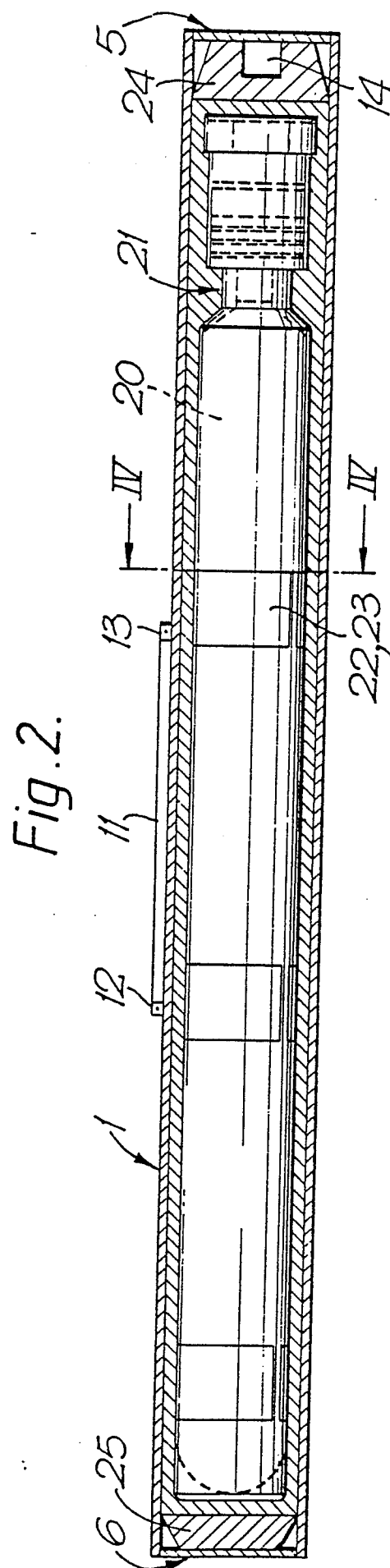
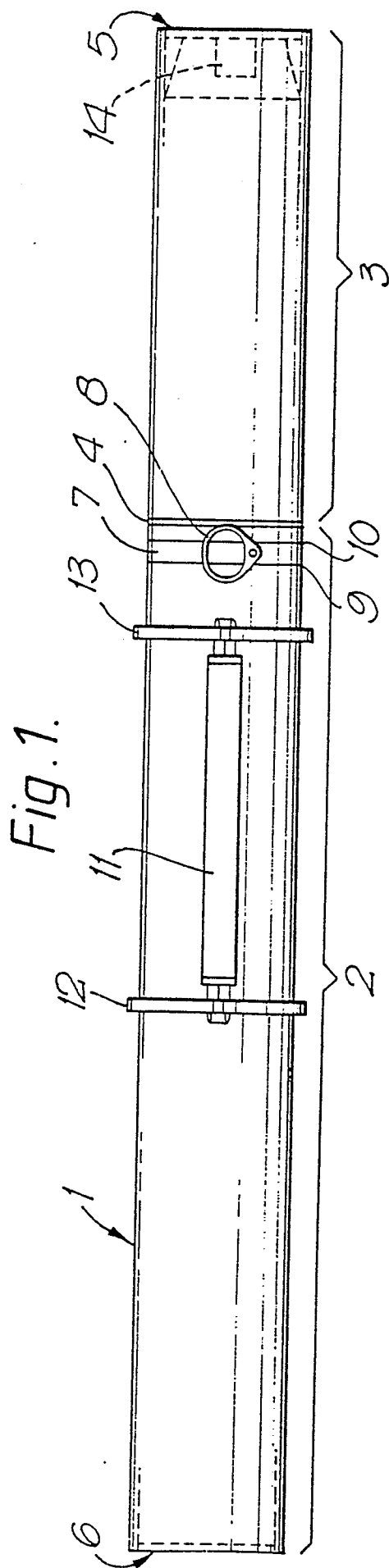


Fig.3.

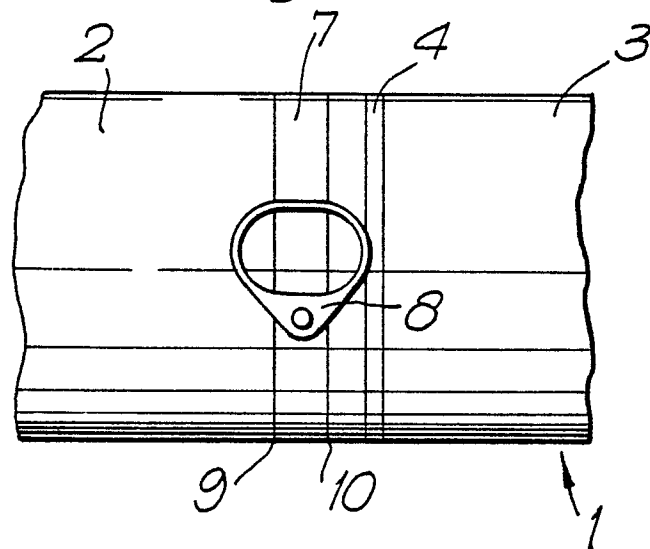
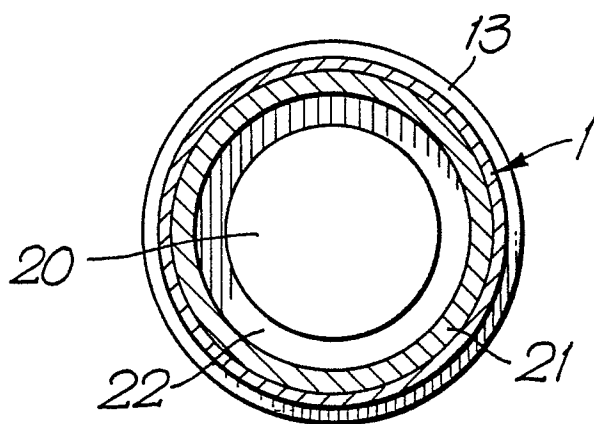


Fig.4.



Neu eingereicht / Newly filed
 Dépôt récent / Recently filed