Jan. 10, 1928. 1,656,095

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WATER AND GREASE PROOF CONTAINER

Filed Jan. 31, 1925

Fig. 1.

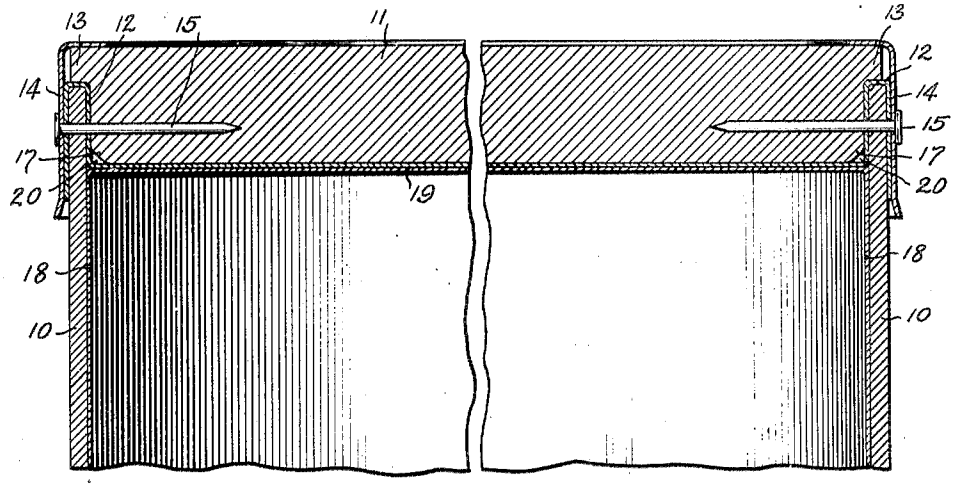


Fig. 2.

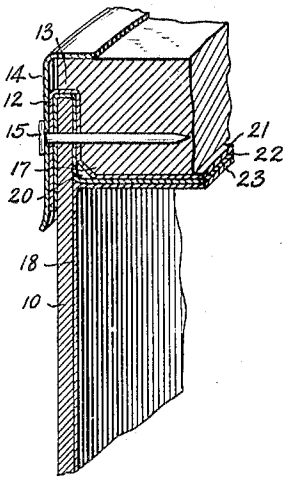


Fig. 3.

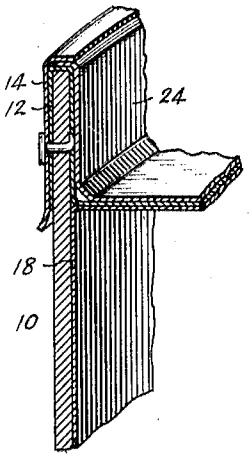
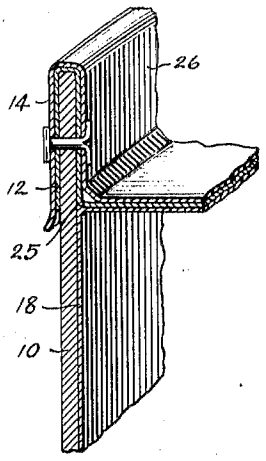


Fig. 4.



WITNESSES

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WATER AND GREASE PROOF CONTAINER.

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This invention relates to a water- and grease-proof container. An object of the invention is to provide a simple and efficient container as an improvement on the type of container set forth in my United States Patent No. 1,414,861, issued May 2, 1922, entitled "Container".

Another object concerns the provision of a simple and efficient container in which liquids and solids of an oily and greasy nature can be contained therein and held therein for an indefinite period without any injury to the container and without any deterioration in the quality of the contents.

A further object concerns the provision of simple and efficient means whereby the absolute protection of the contents of the container from injury is assured without regard to the degree to which the container is subjected to rough handling and treatment in shipment or storage.

The invention is illustrated in the drawings, of which—

Figure 1 is a section through one end of the container as constructed in accordance with my improved invention;

Fig. 2 is a partial section through one end of the container showing a modified form thereof;

Fig. 3 is a similar view showing a still further modification; and

Fig. 4 is a similar section showing a still further modification.

The forms of the invention shown in the drawings are preferred forms, although it is understood that further modifications in the construction and arrangement of the parts and in the character of the materials used may be adopted without departing from the spirit of the invention as set forth in the appended claims.

In its general aspect the invention comprises inserting a head into the end of a container, disposing a stretchable seal between the head and the container and across the bottom of the head, and smearing the inner walls of the container and the inner surface of the seal with glue or similar water- and or grease-proof material which when drying will harden and contract and tend to draw the seal away from the head, especially at the inner edges, to form a gap between the edge of the inner portion of the head and the seal to protect the same from damage at the points where damage would most likely occur in the two held closely disposed together. It is found that, by reason of this peculiar action, products such as butter, lard and similar material, can be packed in a container of this type and be kept in absolutely fresh condition for many months regardless of the handling to which the container has been subjected during this time.

In a further aspect, it is obvious that the coating of the inner walls of the container and seal with grease-proof material makes a practically unbroken unit impervious to liquids, such as grease or any other materials which it is desired to hold successfully in the container.

A further point of importance is a modification by which, by the use of two seals superimposed inside of the head, one seal next to the head having a water-proof and mechanical characteristic, and the second seal, disposed on the inside of the container, so treated that when the material used for water and or grease-proofing sets, it draws the second seal away from the head, releasing the mechanical contact between the corners of the head and the wall. This I find of great importance, for the reason that the container thus treated can be subjected to severe mechanical shocks without affecting the seal.

The preferred forms of the invention as shown in the drawings comprise a container 10 into the end of which a head 11 is inserted. Between this head and the container 10 a seal 12 is disposed, this seal being made of a stretchable material, such as a tough paper or other fibrous material or a suitable fabric, and extending across the bottom of the head, up between the head and the wall of the container, across between the flange 13 of the head and the top edge of the container, and down along the outside of the container between it and a metallic rim 14. In the usual practice, a nail 15 is driven through the rim, the seal, and the upper end of the container into the head. Preferably the head 11 is circular and the lower edge is preferably rounded off as at 17 to prevent the tearing of the seal 12 at this point when the head is introduced into the end of the container.

When it is desired to place within the container a material which is oily or greasy or a liquid, and it is likewise desired that this material be prevented from penetrating the walls of the container, as well as being pro-

tected from air and moisture from without which would affect its freshness, I propose to cover the inside of the container and the inner surface of the seal with a layer of grease- and or water-proof material, indicated by the numerals 18 and 19; 18 representing the layer of such material on the walls of the container, and 19 representing the layer of such material on the seal, although it is understood that this material is painted on in such a manner that it forms a continuous coating to entirely enclose the contents of the container, making an impervious unit within which the contents are held. Any one of a plurality of well known viscid liquid gum compounds, such as gelatinous compounds or spirit gums, or varnishes, which will contract substantially in volume when they dry or "set" and which are impervious to water and grease, can be used to form the proofing layers 18 and 19. In order that such layers may be continuous with each other at the edge of the layer 19, some of this layer-forming proofing material is applied, as by means of a brush on the edge portion of the seal 12 and on the inner wall of the portion of the container in which the head 11 will be disposed prior to the insertion of the head in the container body so that the contiguous portions of the layers 18 and 19 will be in a viscid state when the head is placed in the container body and therefore the layers 18 and 19 will unite with each other at the edge of the layer 19 and will be continuous with each other when the material of which they are formed has dried.

Ordinarily when the seal is placed on and the head driven in, the seal and the head fit together snugly over the corners, but when the seal and the inner walls of the container have been coated with this grease-proof material and the material commences to dry and set, it contracts, and in its contraction it draws the seal away from the corners or edge of the inner portion of the head, thus forming a gap, indicated by the numeral 20, which is of utmost importance in preventing any mechanical shocks to which the container is subjected from breaking the grease-proof seal or coating thus formed on the inner walls of the container.

As shown in Fig. 2, I use, preferably, two seals 21 and 22, the outer one of which is mainly adapted to be water-proof and strong, and the inner one of which is especially adapted to receive the grease-proof material, and is drawn away from the other seal and the corners or edge of the inner portion of the head, as shown in Fig. 2, in exactly the same manner as previously described, the coating of material being indicated by the numeral 23.

In Fig. 3 I show a similar construction using one seal and using a depressed metal head 24 instead of the solid wooden head, such as 11, the other construction being practically the same.

In Fig. 4 a modification is shown using one seal 25 with a complete pressed steel head 26 which acts not only as a head but takes the place of the rim 14 shown in Fig. 1 and used in the other modifications.

Regardless of what type of head is used, and whether one or two seals are used, the essence of the invention is the provision on the inner walls of the seal and the container of means to render the surface waterproof and or grease-proof and to draw the seal away from the head, especially at the corners thereof, to form a gap to prevent damage to the impervious unit thus formed.

What I claim is:—

1. In a container having a wall and head closing the end of the container, a seal comprising a flexible sheet held between the head and the container wall and extending across the inner face of the head and a coating of material which contracts during drying on the inner surfaces of said sheet and said container wall, whereby said sheet is drawn away from the inner edge of the head to prevent rupture of said seal by shock imparted to the container or head.

2. In a container having an inner wall and a head closing one end thereof, a sheet of flexible material extending across the inside of the head of the container, a coating of elastic impervious material applied to the inner wall of said container and to said flexible sheet material, said coating substantially impervious to absorption or leakage of the contents of the container, and said coating separate and independent mechanically from the closing head.

3. In a container having an inner wall and a head closing one end thereof, a sheet of flexible material extending across the inner face of said head, a coating of elastic impervious material applied to the inner wall of the container and to said flexible sheet material, said coating forming a continuous inside surface to the container, said coating substantially impervious to absorption or leakage through said inside surface, and said coating separate and independent mechanically from the closing head.

4. In a container having an inner wall and a head closing the end of said container, a seal therefor comprising a pair of flexible sheets held between the head and the container wall, and extending across the inner face of said head, and a coating of material that contracts during drying, applied to the inner face of the innermost sheet, and to the container wall, whereby the said innermost sheet is drawn away from the inner edge of the head and from the other sheet to prevent rupture of said seal by shock imparted to the container or head.

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