

COMMISSIONER'S DECISION

OBVIOUSNESS: Container closure

The object here was to provide a container closure having a liner material which is suitable for venting gases while blocking liquids. This was considered to be a patentable advance in the art.

Final Action: Reversed.

This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated September 22, 1976, on application 182,884 (Class 206-22). The application was filed on October 9, 1973, in the name of William R. Wheeler, and is entitled "Container Closure And Method."

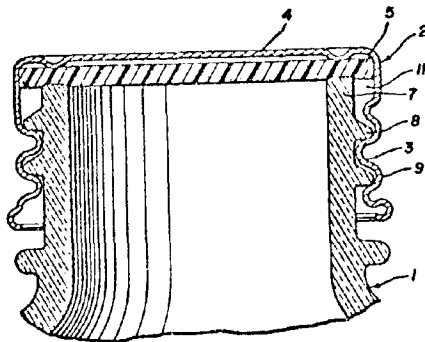
This application relates to a liner for a container closure. The specific object is to provide a container closure having a liner material which is suitable for venting gases while blocking liquids.

In the Final Action the examiner refused claim 1 (the sole claim) for failing to define patentable subject matter over the following patents:

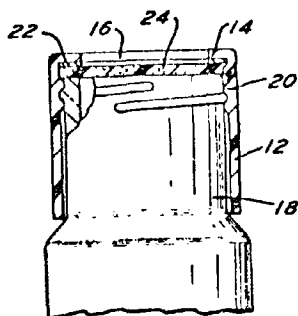
United States

3,071,276	Jan. 1, 1963	Pellett
3,326,401	June 20, 1967	De Long

Both patents relate to container closures comprised of a gas-impermeable shell and a liner that has a porous or microporous structure. Figure 1, shown below, is illustrative of Pellett's invention:



The following figure is illustrative of the De Long invention:



In the Final Action the examiner stated his position (in part) as follows:

...

The terminology chosen by applicants to describe polyvinyl chloride foam differs from that of Pellet by specifying that the liner is a polyvinyl chloride foam having a density in the range of 0.67 to 0.72 grams per cubic centimeter, whereas at column 4, Pellet establishes that he has "provided a controlled venting of a container without leakage of the liquid (or solid) therein by employing a closure liner which is microporous. This in turn depends upon the well known phenomenon that whether or not a liquid will pass through a given micro opening will depend upon the size of the opening, the interfacial tension between the liquid and the solid in which the micro opening occurs and the pressure difference tending to force the liquid through the micro opening. By employing the microporous plastic described above applicants have succeeded in allowing the gaseous decomposition by-produce to pass through but in checking the passage of the liquid, for example, bleaching solution (hypochlorite) without the development of any substantial pressure within the container".

Whether an author chooses to define polyvinyl chloride foam in terms of its density or in terms of the pore size is patentably immaterial since each refers to the same physical and functional characteristics, i.e. permeability.

In other words, Pellet's closure/liner combination does precisely what applicants closure/liner combination does, by using essentially the same structure. Furthermore, Pellett has established that he is aware of the parameters governing the prevention of passage of liquid through the liner while permitting gases to pass through the liner, including pore size in the liner.

Applicants specified density range does nothing more than govern pore size.

Hence, applicant's claim does distinguish over Pellett, but does not essentially or patentably distinguish over Pellett.

...

Applicants emphatic reiterations of his discovery that the Pellett closure is unavailable on the market does not alter the fact that Section 28 of the Patent Act prohibits issue to patent of an

invention that was (a) known or used by any other person before he invented it, or was (b) described in any patent or in any publication printed in Canada or in any other country more than two years before presentation of the petition by the applicant.

Applicants invention was both known before he invented it, and described in patents more than two years prior to applicants petition, in view of DeLong and Pellett.

Therefore, applicants sole claim on file is rejected, since it makes no patentable distinction over the prior art cited.

In his response to the Final Action the applicant had this to say (in part) as follows:

The applicant's contribution has satisfied a long-felt want which would, it is respectfully submitted, have been satisfied many years earlier if, as the Examiner contends, the applicant's invention was in fact described by Pellett et al in 1963 or De Long in his 1967 patent. Considering De Long in greater detail it is important to note that De Long was not concerned with blocking the escape of liquid while permitting the escape gases but was instead concerned with allowing gases to escape while maintaining sterile conditions within the interior of a container by preventing the entrance of a contaminating bacteria. Furthermore, there is no suggestion that the plastic material which was employed should be polyvinyl chloride, much less any suggestion that the density should be within the very specific range claimed by the applicant and considered to be an essential feature of the instant invention.

Pellett et al was admittedly working toward a solution of the problem solved by the applicant and he does suggest the use of polyvinyl chloride in the liner. He does not however suggest the use of a foam polyvinyl chloride, much less a foam polyvinyl chloride having the particular density specified by the applicant. In addition to suggesting the use of polyvinyl chloride Pellett et al suggests the use of 8 other plastics plus derivatives and polymeric mixtures of the suggested plastics. Pellett et al simply tell us to use a microporous plastic material which will give the desired result, namely controlled venting without leaking of the liquid in the container. It is respectfully submitted that this vague description of a desideratum should not prevent the applicant, who has found a specific successful solution to a long-felt want, from protecting his specific solution to the problem as defined in the solitary claim now before the Patent Office.

It is respectfully submitted that the invention defined in the applicant's claim which is directed to a foam polyvinyl chloride liner having a specified density was (a) not known or used by any other person before it was invented by W.R. Wheeler, the inventor named in the present case and was (b) not described in any patent printed in Canada or any other country more than two years before the filing of the instant application and more particularly was not described in either the U.S. patent to Pellett et al nor the U.S. patent to De Long.

The issue to be considered is whether or not the applicant has made a patentable advance in the art. Claim 1 reads as follows:

A container closure comprising a gas-impermeable shell and a polyvinyl chloride foam liner having a density in a range of 0.67 to 0.72 grams per cubic centimeter in the shell, said liner having an open pore structure.

On a complete reading of the disclosure we find that the applicant is concerned with "a method for producing a foamed product suitable as liner material for container closures..." and the product thereof. There are no method claims, however, presently in the application. Original claim 5 related to "a polyvinyl chloride foam closure liner..." The specific issue then will be to consider the alleged invention in so far as the liner for use in a container closure is concerned. This issue in the present circumstances is not without its difficulties, because the cited art is indeed pertinent and especially the Pellett Patent which was concerned with the same problem.

The applicant was concerned with "... having a liner with a combination of properties ideally suited for permitting gases to pass therethrough while blocking liquids." He also stated that "The prior art is lacking in a method or providing foamed plastics material having the right combination of liquid blocking and gas permeable properties" (see page 1 of the present disclosure).

It is clear from the Pellett patent, and the applicant agrees, that polyvinyl chloride has been used before, in different forms, in lining material for container closures. It is also clear that a problem existed in this area especially as it relates to a closure liner "for permitting the escape of gases while blocking liquids." The applicant is, in our view, concerned with a selection range for best results in his foamed liner.

In the Pellett patent we find that he uses a liner of microporous plastic; such plastics may include, among others, polyvinyl chloride. Pellett states that his preferred range of micropores in the plastic layer range from 1 to 15 microns. This we find to be an extremely fine porous liner. By contrast the present applicant is concerned with a polyvinyl chloride foamed (porous) liner having a very specific density range. Pellett also does not suggest the use of a polyvinyl chloride foamed liner.

The DeLong patent is not directed to a closure described as being useful for blocking liquid under pressure while permitting the escape of gases. He was concerned with a container closure for preventing the passage of micro-organic contaminants while permitting free exchange of oxygen to the outside. His advance in the art was for the replacement of "cotton wads" which were previously used for this purpose. He discusses the general use of an open cell porous foam plastics. He does not however, teach nor suggest the solution to the problem of the present applicant.

There is no doubt but that Pellett (1963) was admittedly working toward a solution of the instant problem, and no doubt had some success. On the other hand we have no reason to disagree with the applicant when he states that he has found a specific successful solution to a long-felt want, and that "this very specifically described polyvinyl chloride foam liner is a very significant contribution to the art...." He goes on to say that the specific liner is "highly successful." In discussing the importance of the specific density of his liner the applicant had this to say in solving his particular problem. The present disclosure, page 6 lines 30 ff., reads as follows:

It has been discovered that liquid begins to be permitted to escape through the liner material of the present invention if the material has a density less than the lower preferred density limit of 0.67 grams per cubic centimeter. Exceeding of the upper density value of 0.72 grams per cubic centimeter leads to an inadequate venting of gases, ...

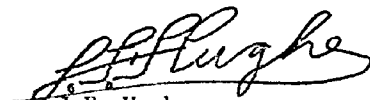
In view of the above consideration we are satisfied that the applicant has made a patentable advance in the art with his specific density selection of a polyvinyl chloride foamed liner. He has, in our view, secured a substantial advantage by the use of the selected density in his foam liner.

We will now consider the claim on file. For convenience it will be reproduced as follows:

A container closure comprising a gas-impermeable shell and a polyvinyl chloride foam liner having a density in a range of 0.67 to 0.72 grams per cubic centimeter in the shell, said liner having an open pore structure.

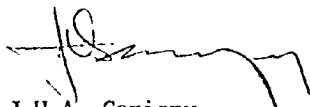
It is clear that this claim is directed to the essence of what, in our view, is a patentable advance in the art. By stating that it is a container closure he is merely delimiting the monopoly of the invention to the intended use. It does not indicate that there is an inventive step in making the container closure. This claim appears in allowed form.

In summary we are satisfied, but not without some hesitation, that the applicant has made a patentable advance in the art. We recommend that the decision in the Final Action to refuse the claim be withdrawn.



J.F. Hughes
Acting Chairman
Patent Appeal Board, Canada

Having studied the prosecution of this application and considered the recommendation of the Patent Appeal Board I have decided to withdraw the Final Action. The application is returned to the examiner for resumption of prosecution.



J.H.A. Gariépy
Commissioner of Patents

Dated at Hull, Quebec

this 16th. day of June, 1977

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