

## **Candidate's answer**

### Claims

1. Closure (10, 20, 30) for a beverage container (1, 21), the closure being arranged for accelerating the maturing process of a beverage (2), the closure comprising a body (3, 13, 23), a vibrator unit (4) for generating sound waves (5) in the beverage (2), ~~an air channel (17)~~, and means (8, 9) for conducting electrical signals to the vibrator unit (4), characterized in that the vibrator unit (4) comprises an electro-mechanical piezoelectric vibrator (41) for generating the sound waves at different frequencies.
2. Closure according to claim 1, wherein the body (3, 13, 23) is made of wood, cork or a synthetic polymer.
- ~~3. Closure according to any previous claim, wherein the electro-mechanical vibrator unit (4) is comprises a piezoelectric vibrator (41) for generating sound waves at different frequencies.~~
4. ~~3.~~ Closure according to claim ~~3~~ 1 or 2, wherein the vibrator unit (4) comprises comprising a vibrator plate (43) having a parabolic surface.
- ~~5.~~ 4. Closure according to any previous claim comprising an air channel (17).
- ~~6.~~ 5. In a bottle A system comprising a bottle (21); and a closure according to any previous claim 4, wherein the bottle (21) has comprises a base having an internal parabolic surface (16).

Dear Sirs,

In response to the Official Communication under A94(3) EPC:

- We hereby request accelerated examination under the PACE scheme.
- New claims 1 to 5 are submitted to replace all claims presently on file.

Amendments

- Claim 1 is amended to incorporate former claim 3, on the basis of the previous dependency of claim 3 on claim 1. Further basis can also be found for embodiment 1 in Fig. 1 ref #41 and para [005], for embodiment 2 in Fig. 2 ref #41 and para [007] ('same vibrator unit') and for embodiment 3 in Fig.3 ref #41 and para [009].
- Further, the 'air channel' feature from former claim 1 has been deleted and inserted as new dependent claim 4.
- It is submitted that the removal of the air channel from claim 1 does not contravene A123(2) as the skilled person would directly and unambiguously recognise that, as set out in GL H-V, 3.1 and T331/87:
  - i. The 'air channel' is not explained as essential in para [011] as embodiments of the closure 'do not need to have an air channel' (para [011] line 23), as is shown for embodiment 1 in Fig. 1 and para [005] in which the container comprises an air inlet instead, not the closure.
  - ii. The feature is not an indispensable function of the closure – as set out in para [011], closures may be used with containers having their own inlet (as shown in Fig.1 (air channel 17)). Thus, the 'air channel', as part of a closure, is not, as such, indispensable for the function of the closure invention in light of the technical problem (set out on subsequent pages) that the invention serves to solve.
  - iii. Further, there is nothing at all to suggest that removal of the 'air channel' requires any real modification of other features – any adjustment to sizing, for example, of the closures illustrated in Fig. 2 (embod 2) and Fig.3 (embod 3) would be trivial to the skilled person.
- Claim 3 (former claim 4) has been amended to clarify that, in an embodiment, the 'vibrator unit (4)' comprises a vibrator plate (43) having a parabolic surface. Explicit basis for this can be found in para [009] lines 13-14. This amendment also overcomes the objection raised in section 4 of the Examination report.

- New depending claim 4 claims the air channel removed from claim 1. Basis for the closure comprising an air channel can also be found in para [008] line 2-3 (embod. 2) and Fig. 2 ref #17 and para [011] line 20-21 and Fig 3#17 for embod. 3.
- New claim 5 claims a system comprising a bottle and closure according to claim 4, wherein the bottle comprises a base having an internal parabolic surface. Explicit basis for this can be found in para. [003] (the invention also includes ...) and also in Fig. 3 which shows such a bottle with a closure according to claim 4 (i.e. having an air channel).
- Further, it is submitted that the claims comply with A82/R44 EPC as they relate only to a single inventive concept, i.e. the presence of the piezoelectric vibrator for generating sound waves at different frequencies.
- Therefore none of the amended claims contravene A123(2) and retain unity of invention.
- In addition, independent claim 1 has also been placed in 2-part form in accordance with R43(1) EPC.

#### Novelty

- The invention as claimed in claim 1 relates to a 'closure for a beverage container' having, in particular a 'vibrator unit comprising a piezoelectric vibrator (41) for generating the sound waves at different frequencies (the characterising portion).
- D1 fails to disclose the characterising portion, instead showing the use of tuning forks.
- Claim 1 is therefore novel over D1.
- D2 fails to show a closure with a vibrator unit, and further fails to show a closure comprising a piezoelectric vibrator for generating sound waves at different frequencies. In D2, the illustrated piezoelectric vibrator is not part of the closure, nor operates at different frequencies.
- Claim 1 is therefore novel over D2.
- By virtue of their dependencies to claim 1, all other claims are also novel over D1 and D2.

### Inventive Step

- In accordance with GL G-VII 5.1, D1 may be taken to be the closest prior art because it is directed to a similar purpose as the invention of claim 1 which is to accelerate the maturing process of a beverage. Further, it also includes a closure with channel (embodiment of the invention use an air vent) and thus requires less structural modification than D2.
- In D2 however, the disclosure is concerned with sediment removal, with a sealed bottle and pressure sensor. Whilst a vibrator unit having a piezoelectric vibrator is shown, this is used for a completely different purpose and is not part of the closure at all.
- Thus, starting with D1, the subject matter of claim 1 differs from that known from D1 in that the vibrator unit comprises a piezoelectric vibrator for generating the sound waves at different frequencies.
- A technical effect of this difference is that a single closure can be used to generate sound waves at different frequencies, thereby allowing different specific flavours to be developed in an alcoholic beverage using a single closure, and avoiding the need to change closures.
- An objective technical problem associated with D1 is therefore how to modify D1 to allow a single closure to be used to developed different flavours in an alcoholic beverage.

### D1 alone

- The skilled person, presented with D1 and the above objective technical problem (OTP) would see that the different tuning forks cause the different sound waves to be generated. There is no hint or suggestion of how only a single enclosure could be modified to overcome the OTP and achieve the invention according to claim 1.
- If the skilled person were to consider modifying D1, they would instead consider attempting to modify the closures to incorporate multiple tuning forks, or even (if it were possible) attempt to modify the tuning fork such that it would resonate at more than one frequency. In either case, it would still require the use of a loudspeaker to cause the (or several) tuning forks to resonate.
- Thus, even if the skilled person were to consider modifying D1, they would still not arrive at the invention as claimed in claim 1.
- Claim 1 is therefore inventive over D1 alone.

### D1 with D2

- The skilled person would not be motivated to consider D2 because, in accordance with GL G-VII-6, D2 is considering solving a different problem of sediment removal (D2/[001]), further D2 is also concerned with shaking the entire bottle, and also sensing pressure build up in an unvented bottle. D2 is, in summary, concerned with sediment removal via micro-shaking – a problem unrelated to the OTP. Thus, the skilled person would not consider D2.
- Further, even if the skilled person did consider D2 in conjunction with D1 and the OTP, they would still not arrive at the claimed invention.
- Instead they would see the use of a sealed closure and the use of a piezoelectric vibrator (PEV) operating at a fixed frequency (D2 para [003] line 19) on the end of the bottle. There is no hint or suggestion that the PEV frequency could be varied, and even if it was considered (which would not happen as the control unit in D2 is only arranged to generate a fixed frequency), then the skilled person would retain the use of a PEV on the outer surface of the bottle (D2 para [003] line 16-17) and not as part of the closure as claimed in claim 1. Still further, presented with D2, the PEV of D2 teaches the skilled person that the PEV needs to have a width of several cms (D2 para [004] line 27) because of heavy bottles. Combining such a PEV of D2 with the closure of D1 would be impossible as the closure and PEV of D2 would not fit through the opening of a bottle.
- Thus, claim 1 is inventive over D1 in combination with D2.

### D2 alone, or D2 with D1

- Even if the skilled person were to start with D2, there is no suggestion that the closure D2 could be modified to incorporate the PEV of D2, nor any hint or suggestion of adjusting frequencies, nor any consider of the OTP.
- Even if D1 was then considered, it would only yield the structure of D2 with tuning forks in the closure.
- Claim 1 is therefore also inventive over D2 alone and D2 in combination with D1.

### Requests

- We request grant of the application on the basis of the new claims pending revision of the description in conformity with the new claims.
- Oral Proceedings are hereby requested in the event the Examiner is minded to refuse the application.

Signed:

Mr Cork

### Note to Examiner

- Client suggestion in claim 6 (my claim 5) has been modified to avoid risk of further clarity objections, in accordance with GL F-IV, 4.15, further the client sells 'special bottles' with closures, and so protection for his products are retained.
- No further dependent claims have been added at the clients request.

**EXAMINATION COMMITTEE I**

Candidate No.

## Paper B (Electricity/Mechanics) 2013 - Marking Sheet

| Category     | Maximum possible                | Marks awarded |        |    |
|--------------|---------------------------------|---------------|--------|----|
|              |                                 | Marker        | Marker |    |
| Claims       | 30                              | 30            | 30     |    |
| Arguments    | Request accelerated examination | 3             | 3      | 3  |
|              | Basis for Amendments            | 23            | 17     | 18 |
|              | Clarity                         | 3             | 3      | 3  |
|              | Novelty                         | 4             | 4      | 4  |
|              | Inventive Step                  | 37            | 28     | 29 |
| <b>Total</b> | 100                             | 85            | 87     |    |

Examination Committee I agrees on 86 marks and recommends the following grade to the Examination Board:

PASS  
(50-100)

COMPENSABLE FAIL  
(45-49)

FAIL  
(0-44)

27 June 2013

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Chairman of Examination Committee I