

*Collegio Italiano dei
Consulenti in Proprietà Industriale*

Paper C EQE 2021

Sara Morabito, Giulia Pietra

24 novembre 2021



FÉDÉRATION INTERNATIONALE DES CONSEILS
EN PROPRIÉTÉ INTELLECTUELLE

INTERNATIONAL FEDERATION OF
INTELLECTUAL PROPERTY ATTORNEYS

INTERNATIONALE FEDERATION
VON PATENTANWÄLTEN

DISCLAIMER

- The following presentation contains private opinions of the tutor. It is intended to provide the best advice according to the knowledge of the tutor.
- Each paper is different, and there is no single „methodology“ guaranteed to yield the correct solution of the paper. The best methodologies are called „knowledge“ and „common sense“.
- This presentation is not intended as a „methodology“



WHAT DO YOU RECEIVE?

PART C(I)

- first Client's letter
- A1 – patent to be opposed: **only a part of the claims and/or description!**
- Annexes A2 to A? (typically A2 to A6) – prior art documents provided by the client. **All prior art documents provided, also those not usable for attacking claims of PART C(I)!**

PART C(II)

- second Client's letter
- A1 – patent to be opposed: **complete version**
- Annexes A2 to A? (typically A2 to A6)



WISEFLOW

- Electronic tool for EQE 2021, EQE 2022 and ...?
- Familiarize with it! Read all documents, take part to mocks, prepare your PC system
- Solve papers in wiseflow mode

<https://www.epo.org/learning/eqe/e-eqe.html>

- Possible last-minute updates: stay tuned!



WHAT ARE YOU REQUIRED TO PREPARE?

- A notice of opposition against A1
- Attack all claims that can be attacked
- Art. 100(a) grounds: not patentable under Art. 52-57
- Art. 100(c) grounds: added subject-matter
- Do NOT use Art. 100(b) ground



STEPS

1. Read the client's letter
2. Establish the number of claims and their dependency
3. Establish effective dates of the claims
4. Establish dates of the prior art annexes and their usability
5. Read the claims
6. Read and analyze A1
7. Read and analyze prior art annexes A2 – AX (X = 5 or 6 typically)
8. Establish attacks
9. Draft the Notice of Opposition

 for part C(I) and part C(II)



NOVELTY ATTACK (I)

- Basically copy the claim and for each feature explain in parentheses **where** it can be found in the cited AX and **why** it is the same (if not indicated by the same word)
- You gain marks for finding the feature (use of information marks), but more importantly for **arguing where it is found and why it is the same feature** (argumentation marks)
- In this argumentation you will sometime refer to another Annex, in which the definition is given



NOVELTY ATTACK (II)

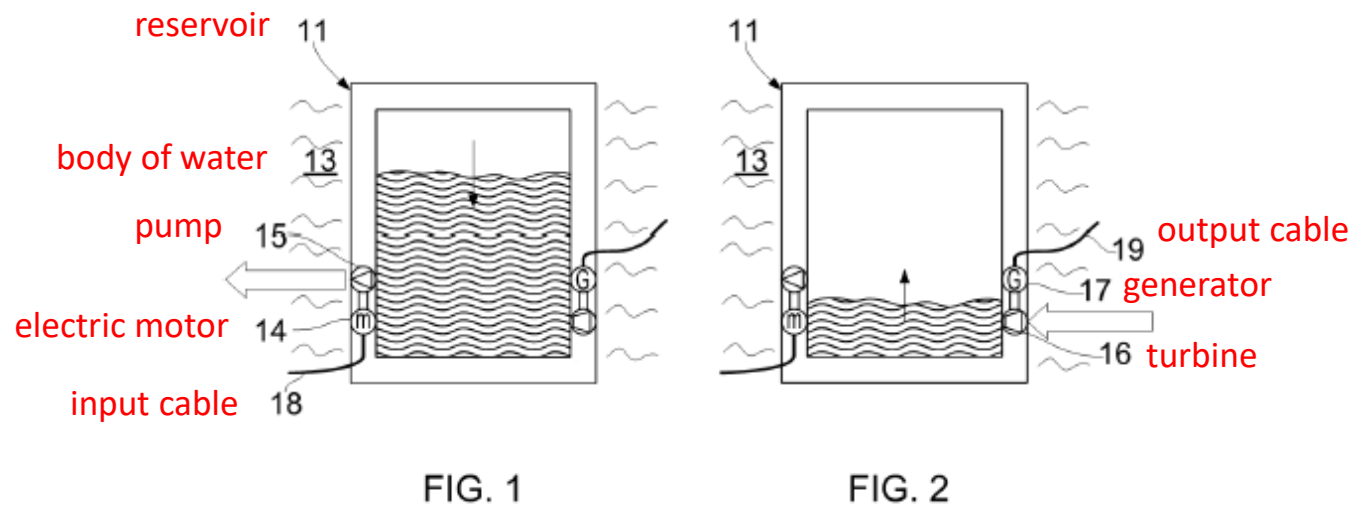
- Generic vs. specific (specific disclosure takes away the novelty of generic disclosure, but not vice versa, e.g., „copper“ vs. „metal“; ranges)
- Implicit features – only if there is a strong case (sometimes hinted on by other documents) – do not speculate or overthink, do not use your specialist knowledge
- Equivalence of features may be provided in the same document OR **in another document** OR in the PATENT to be **OPPOSED**



A1 – PART C(I) (I)

underwater hydroelectric energy storage – prior art

a reservoir is any compartment surrounded by a wall, out of which compartment water can be pumped out and into which water can be let in, par. [0002])



A1 – PART C(I) (II)

anti buoyancy means

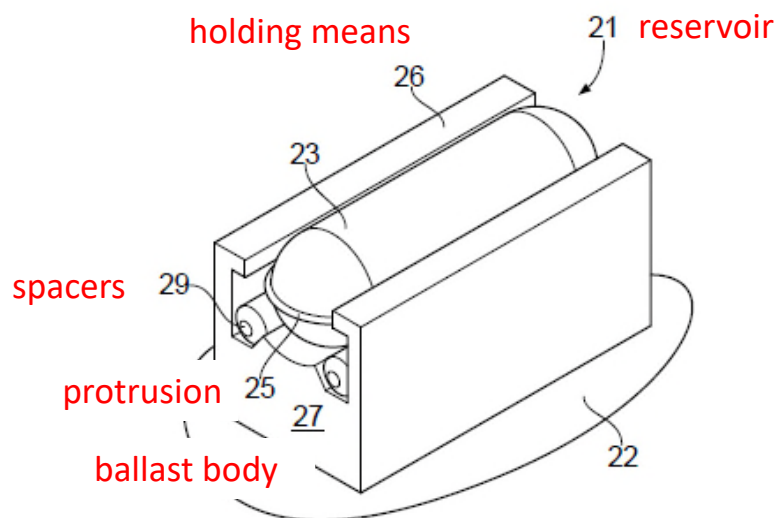


FIG. 3

anchors and ballasts are known anti-buoyancy means, par. [0005]

structure providing buckling resistance

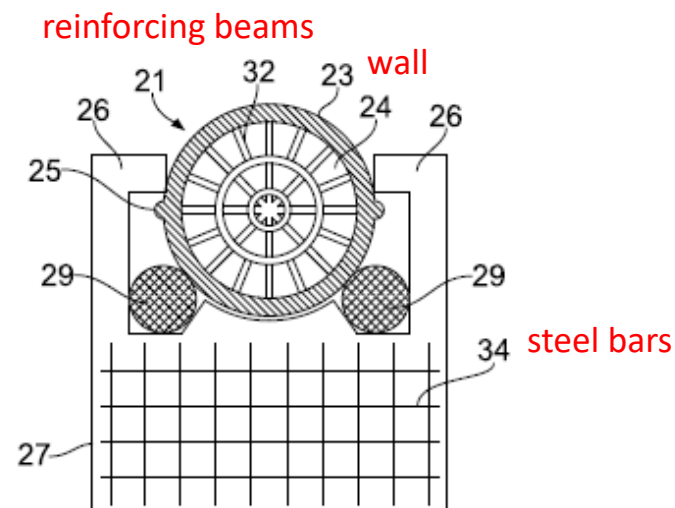


FIG. 4

buckling resistance [...] means that at the deployment depth the reservoir does not collapse irrespective of the amount of water pumped out of the compartment. It is well known that the wall of the reservoir may be designed to be part of such a structure providing buckling resistance, par. [0004]

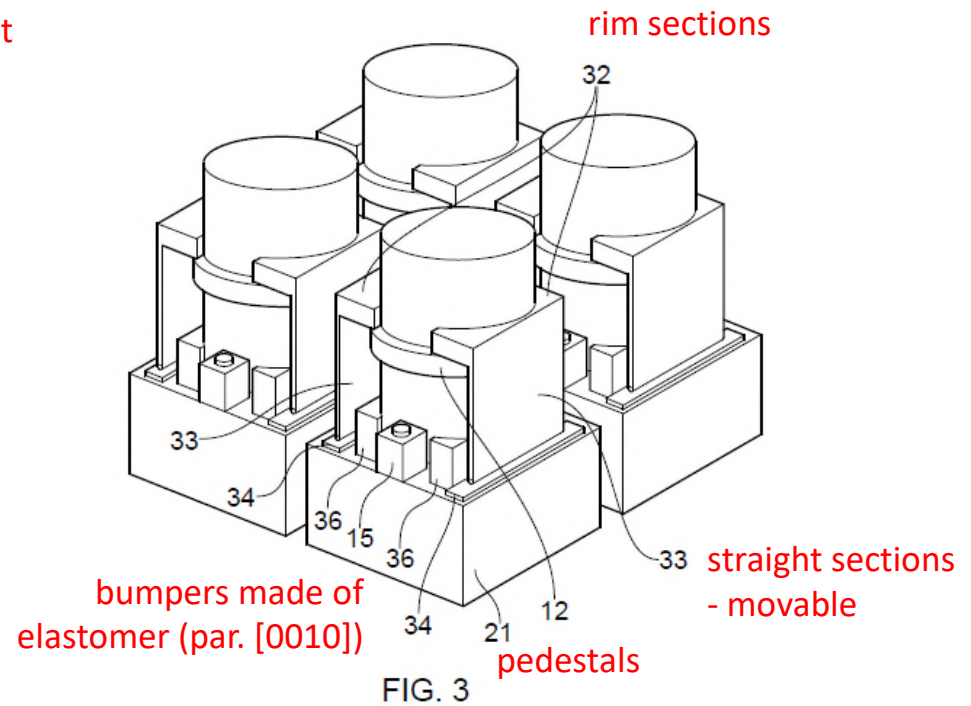
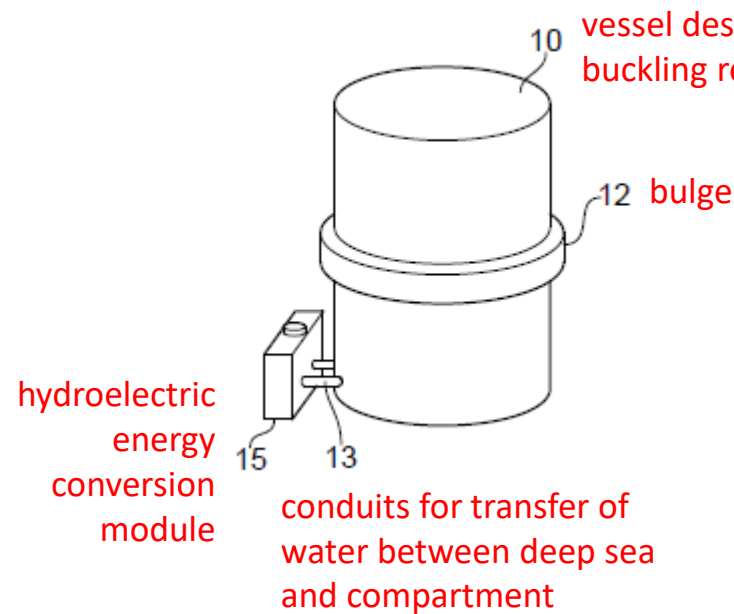
CLAIM 1 – PART C(I)

1. An underwater energy storage device comprising
 - a reservoir (21), a structure providing buckling resistance thereto,
 - anti-buoyancy means having a ballast body (27) with holding means (26), and
 - spacers (29) made from an elastomer; wherein
 - said reservoir (21) has a protrusion (25) along its external surface,
 - said spacers (29) are arranged between the reservoir (21) and the anti-buoyancy means, and
 - said holding means (26) releasably engages with the protrusion (25) so that the weight of the ballast body (27) is conveyed to the reservoir (21).

effective date  priority date NO'33 (letter)



A3



publication date after effective date claim 1 → prior art 54(2) EPC

GOOD ATTACK TO CLAIM 1?

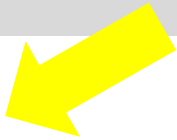
A3 discloses an underwater energy storage device comprising a reservoir (vessel 10), a structure providing buckling resistance thereto, anti-buoyancy means having a ballast body (pedestal 21) with holding means (rim sections 32), and spacers made from an elastomer (bumpers 36), wherein said reservoir has a protrusion (bulge 12) along its external surface, wherein said spacers are arranged between the reservoir and the anti-buoyancy means and said holding means releasably engages with the protrusion so that the weight of the ballast body is conveyed to the reservoir.

12 marks
available

Therefore A3 discloses all the features of claim 1 of A1, which thereby lacks novelty.



NOVELTY ATTACK TO CLAIM 1

CLAIM 1	Annex 1	Annex 3 - second embodiment	Annex 5
An underwater energy storage device comprising		hydroelectric energy conversion module 15, high energy storage capacity in par. [0009]	
a reservoir (21)	reservoir = compartment surrounded by a wall, out of which compartment water can be pumped out and into which water can be let in (par. [0002])	vessel 10 has walls and a compartment, water can be transferred from/to deep sea (par. [0002]-[0003])	
a structure providing buckling resistance thereto,	buckling resistance = at the deployment depth the reservoir does not collapse. Known wall of reservoir part of structure providing buckling resistance (par. [0004])	buckling resistant using double walls of marine-grade steel and concrete (par. [0002])	
anti-buoyancy means having a ballast body (27) with holding means (26)	ballasts whose weight provides downward force are known anti-buoyancy means (par. [0005])	pedestal 21 providing downward force (par. [0005]) and rim sections 32	
and spacers (29) made from an elastomer		bumpers 36 made of elastomer (par. [0010])	bumpers 31 are elastic spacers (par. 0011])
said reservoir (21) has a protrusion (25) along its external surface		bulge 12	
said spacers (29) are arranged between the reservoir (21) and the anti-buoyancy means		bumpers 36 arranged between vessel 10 and straight sections 33 of rim sections 32	
said holding means (26) releasably engages with the protrusion (25) so that the weight of the ballast body (27) is conveyed to the reservoir (21).		straight sections 33 movable by having hinges 34, par. [0009]	

GOOD ATTACK TO CLAIM 1! (I)

A3 discloses as second embodiment an underwater energy storage device (hydroelectric energy conversion module disclosed in par. [0003] of A3 and high energy storage capacity disclosed in par. [0009] of A3) comprising:

- a reservoir (par.[0002]-[0003] of A3 : the vessel 10 has walls, a compartment, and water can be pumped in and out, so it is a reservoir according to the definition in par. [0002] of A1), and
- a structure providing buckling resistance (the vessel 10 is made to be buckling resistant using double walls of steel and concrete, par. [0002]. The walls of the reservoir themselves are known to be part of the structure providing buckling resistance, par. [0004] of A3)



GOOD ATTACK TO CLAIM 1! (II)

- anti-buoyancy means having a ballast body (the weight of pedestal 21 provides a downward force, see par. [0005], so it is a ballast body according to the definition given in par. [0005] of A1) with holding means (rim sections 32 clamp down, see par. [0009] of A3)
- and spacers (bumpers 36 described in par. [0008] of A3, which are spacers according to par. [0011] of A5) made from an elastomer (par. [0010] of A3)
- the reservoir has a protrusion along its external surface (bulge 12 in par. [0002] of A3)

GOOD ATTACK TO CLAIM 1! (III)

- the spacers are arranged between the reservoir and the anti-buoyancy means (the bumpers 36 are arranged inside the straight sections 33 of the rims 32, see par. [0008] of A3 and Fig. 3)
- the holding means releasably engages with the protrusion so that the weight of the ballast body is conveyed to the reservoir (par. [0009] of A3 discloses that the straight sections 33 are movable by having hinges 34. Par. [0007] of A3 further explains that the downward force is conveyed to the vessel via an interaction of the vessel's bulge 12 with the rim sections 32).

Therefore A3, second embodiment discloses all the features of claim 1 of A1, which thereby lacks novelty.



NOVELTY ATTACK - SUMMARY

- cite specific reference in the relevant document (paragraph, line, page, figure)
- if prior art uses different terminology, explain why it has the same meaning (using information provided in the annexes, not based on your knowledge)
- repeating claim wording without specific references in the relevant document and without explanations on different terminology gives you very few marks.



NOVELTY ATTACK –SUMMARY (II)

- The use of information requires citation of the specific reference in the relevant document (e.g. paragraph, line, claim, figure, as appropriate). If prior art uses different terminology to the feature in a claim, a full reasoning requires an explanation why the meaning is the same, on the basis of the information provided in the Annexes
- For example, in this year's paper the equivalence of terms such as "vessel" or "tank" to the feature "reservoir" in the claims of Annex 1 was to be established based on the properties listed in [0002] of Annex 1 (walls, compartment, water can be pumped in and out).



INVENTIVE STEP ATTACK (I)

1. determine closest prior art (CPA)
 - add reasoning for selecting the CPA
 - Not necessarily the document used for a novelty attack of the independent claim
 - Not necessarily the document having the highest number of features in common
2. mention features in common with the claim
 - similar to a novelty attack
3. determine the difference between claim and CPA
 - In term of object
4. technical effect of that difference
 - as presented in A1

INVENTIVE STEP ATTACK (II)

5. formulate objective technical problem

- Choose the “macroscopic effect”
- Effect is the same as in the CPA – the OTP is to find an alternative
- No technical effect of the different feature – no OTP

6. combine CPA with another document/disclosure and mention why said document may be considered by skilled person

- Motivation of the skilled person to find the second document (e.g., same field, more general field, neighboring field – why the SP would look there)

7. argue why skilled person is motivated to use solution from said document (could/would approach)

- compatibility of materials, no need for further technical modifications, direct hint in the second document that the solution is generally utilizable, etc..

8. Conclusion



A1 – PART C(II)

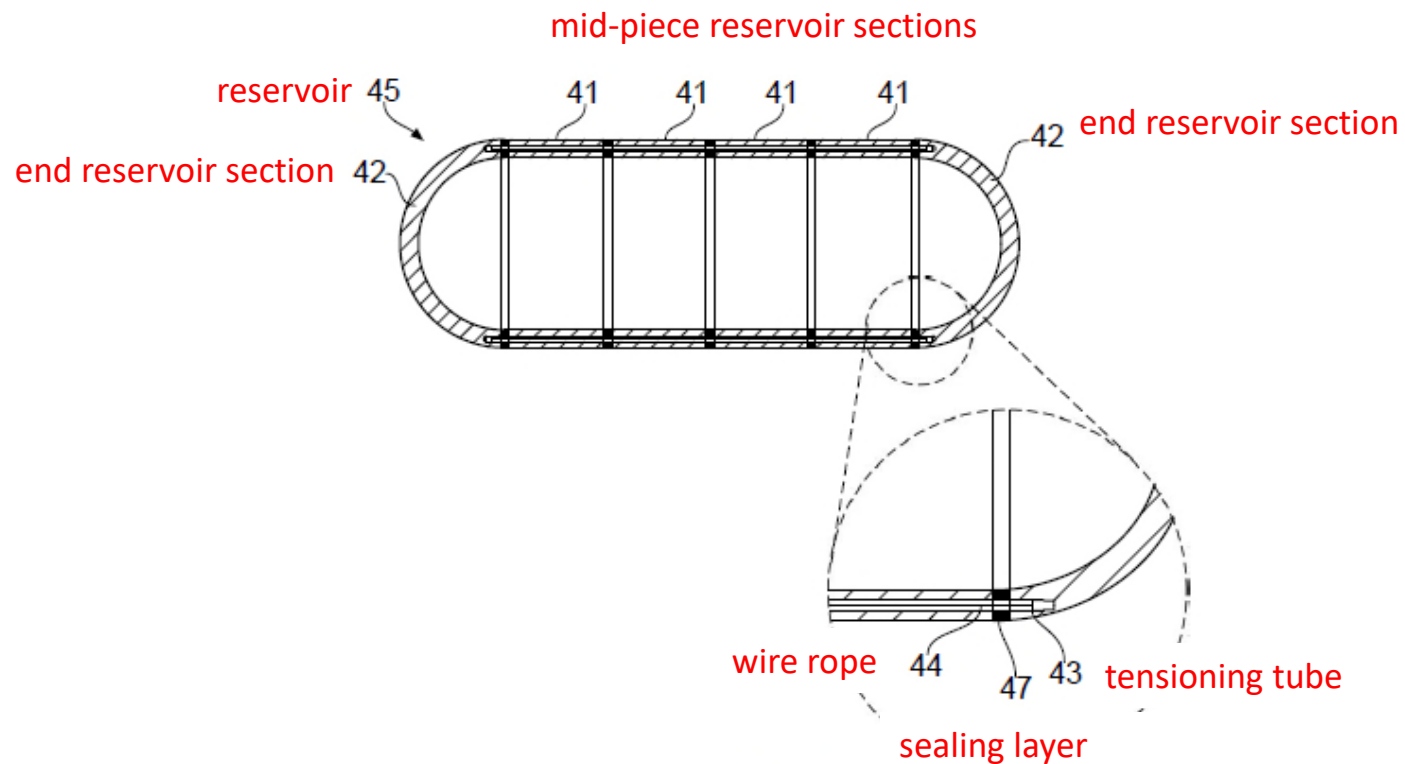


FIG. 5

CLAIM 4 – PART C(II)

4. An underwater energy storage device comprising
- a reservoir (45), a structure providing buckling resistance thereto, and anti-buoyancy means; wherein
 - said reservoir (45) has been formed by joining several mid-piece reservoir sections (41) and two end reservoir sections (42),
 - said reservoir sections (41, 42) are provided with tensioning tubes (43) through which wire ropes (44) are strung, and
 - said wire ropes (44) comprise strands of twisted metallic wires, the number of strands being 7 or fewer.

effective date  priority date NO'55 (letter)



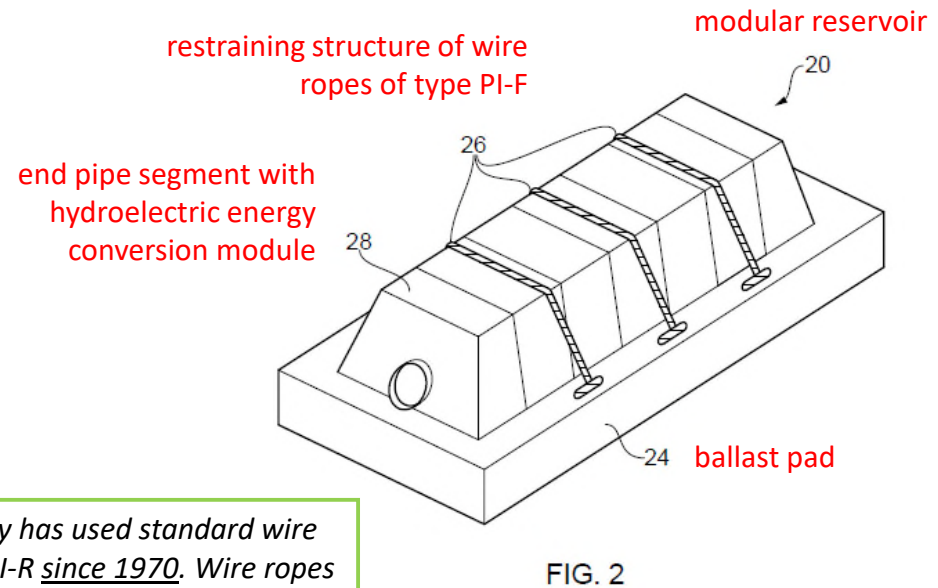
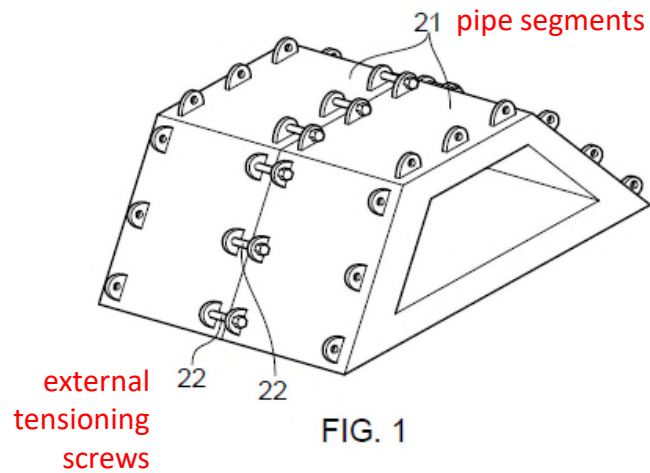
CLAIM 5 – PART C(II)

5. A device according to claim 4, wherein
- said reservoir (45) has been formed so that adjacent reservoir sections (41, 42) are joined with a sealing layer (47) between them,
 - said sealing layer (47) comprising an elastomer; and
 - said reservoir (45) is connected, for the purpose of storing energy, to a pump driven by an electric motor and connected, for the purpose of releasing energy, to a turbine driving a generator.

effective date  priority date NO'55 (letter)



A4

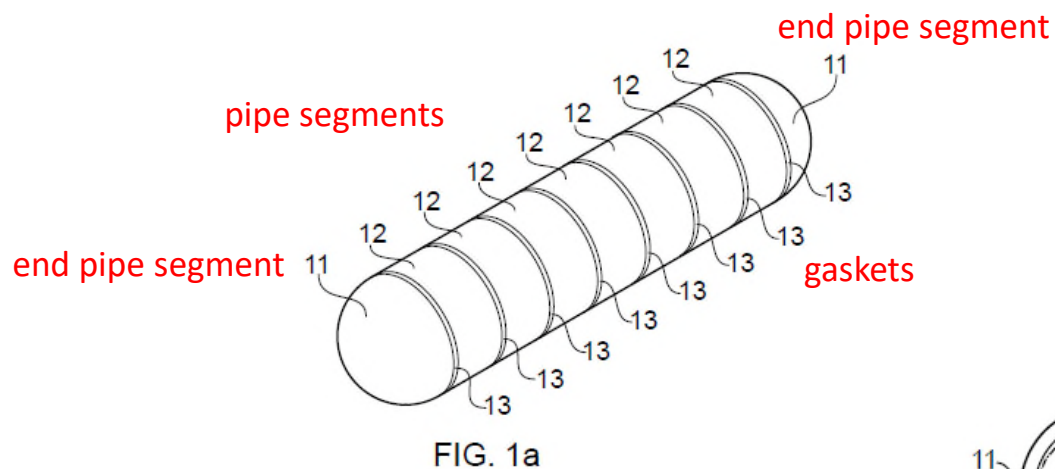


The petroleum industry has used standard wire ropes of type PI-F and PI-R since 1970. Wire ropes of type PI-F have a high tensile strength. They always have more than 7 strands of twisted metallic wires, Editor's footnote of A2

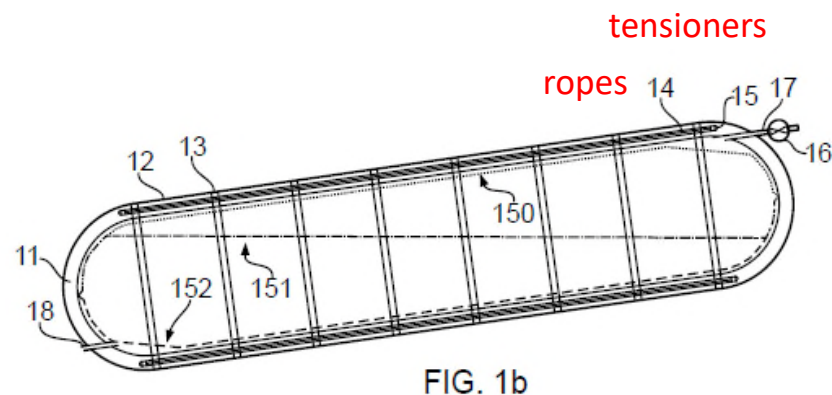
publication date after effective date claims 4, 5 → prior art 54(2) EPC

A5

Tank for underwater storage of petroleum products



*the wire ropes are of type PI-R, par. [0005].
The petroleum industry has used standard wire ropes of type PI-F and PI-R since 1970. Wire ropes of type PI-R have 7 strands of twisted metallic wires or fewer, Editor's footnote of A2*



publication date after effective date claims 4, 5 → prior art 54(2) EPC

INVENTIVE STEP ATTACK TO CLAIM 5

CLAIM 4 & 5	A1	A4	A5
An underwater energy storage device comprising		X [01] [06]	X
a reservoir (45),		X	X
a structure providing buckling resistance thereto, and		X	
anti-buoyancy means wherein		X [09]	X [3]
said reservoir (45) has been formed by joining several mid-piece reservoir sections (41)	lower costs	X (modular) [02]	X [2]
and two end reservoir sections (42),		X [02]	X
said reservoir sections (41, 42) are provided with tensioning tubes (43)	guarantees long service period	[03]	
through which wire ropes (44) are strung, and			X [4]
said wire ropes (44) comprise strands of twisted metallic wires, the number of strands being 7 or fewer	tensile strength and easy braiding technique	wire ropes PI-F	PI-R
said reservoir (45) has been formed so that adjacent reservoir sections (41, 42) are joined with a sealing layer (47) between them,		gasket	X
said sealing layer (47) comprising an elastomer		X [04]	gasket [6] DEF.
and said reservoir (45) is connected, for the purpose of storing energy, to a pump driven by an electric motor and		[06]	
connected, for the purpose of releasing energy, to a turbine.		[06]	

GOOD ATTACK TO CLAIM 5? (I)

A4 and A5 both disclose an underwater energy storage device with a modular reservoir. A5 is the CPA because it is novelty destroying for the independent claim 4. Additionally A5 describes the device having the highest number of features in common with the device of claim 5.

A5 discloses all the features of claim 4: an underwater energy storage device comprising a reservoir (45), a structure providing buckling resistance thereto, and anti-buoyancy means; a reservoir (45) formed by joining several mid-piece reservoir sections (41) and two end reservoir sections (42), said reservoir sections (41, 42) are provided with tensioning tubes (43) through which wire ropes (44) are strung, and said wire ropes (44) comprise strands of twisted metallic wires, the number of strands being 7 or fewer.

A5 also discloses the reservoir (45) is formed so that adjacent reservoir sections (41, 42) are joined with a sealing layer (47) between them, said sealing layer (47) comprising an elastomer.



GOOD ATTACK TO CLAIM 5? (II)

The subject matter of claim 5 then differs from A5 in that the reservoir (45) is connected, for the purpose of storing energy, to a pump driven by an electric motor and connected, for the purpose of releasing energy, to a turbine driving a generator.

The technical effect of this distinguishing feature is that the device of claim 5 may be used for storing hydroelectric energy.

By means of the pump electric energy is converted in and stored as potential energy, by means of the turbine potential energy is converted into electric energy delivered to an electric output cable 19.

The objective technical problem can then be regarded as how to modify the device of A5 so as to allow storing of hydroelectric energy.

The skilled person starting from A5 and posing this problem would be taught by A4 to provide the device of A5 with at least one pump and one turbine, thereby arriving to the subject matter of claim 2 without exercising any inventive skill.

Claim 5 therefore lacks inventive step over A5 in combination with A4.

16 marks
available



GOOD ATTACK TO CLAIM 5 (I)

A4 and A5 both disclose an underwater energy storage device with a modular reservoir. A4 is the CPA because **it is the only document disclosing underwater hydroelectric energy storage because of the features of pump/motor/turbine/generator. A5 is not useable for storing electric energy (its tank is not built to resist forces arising from hydrostatic pressure, see A5[0010]).**

A4 discloses:

An underwater energy storage device (A4[0001] or [0006]) comprising

- a reservoir (e.g. A4[0002]),
- a structure providing buckling resistance thereto (A4[0003]), and
- anti-buoyancy means (A4[0009])
- the reservoir being formed by joining several midpiece reservoir sections and two ending reservoir sections (“pipe segments”/“end pipe segments” mentioned for instance in A4[0002]; pipe segments are reservoir sections, see A1[0021]),
- said reservoir sections being provided with tensioning tubes (A4[0003]: lengthwise cylindrical cavities; these are a possible implementation of tensioning tubes, A1[0019]).

GOOD ATTACK TO CLAIM 5 (II)

A4 discloses

- the reservoir is connected to a pump driven by an electric motor and a turbine driving a generator (A4[0006]: "electromechanical components [...] **which are a pump driving an electric motor and a turbine driving a generator, see A1[0002] or A3[0003]**),
- adjacent sections are joined with a sealing layer comprising an elastomer (A4[0004]: "gasket made from an elastomer"; A5[0006]: "gasket is a sealing layer");

The subject matter of claim 5 then differs from A4 in that the subject matter of claim 5 further comprises:

- wire ropes are strung through the tensioning tubes, and
- said wire ropes comprise strands of twisted metallic wires, the number of strands being 7 or less. **(rope of A4 are PI-F)**



GOOD ATTACK TO CLAIM 5 (III)

The technical effect of the 1st distinguishing feature is the protection against outside damage. This feature solves the technical problem of providing a long service period (cf. A1[0021]).

The skilled man desiring to solve the OTP would consult A5 in the aim to improve A4 since A5 also deals with the problem of providing a long service period (A5[0007]). A5 discloses wire ropes (14) (A5[0004]) strung through lengthwise boreholes (boreholes are tensioning tubes, cf. A1[0019]).

The wire assembly of A5 uses wires of type PI-R (A5[0005]), which are wires as claimed (see A2, p. 4, footnote).

When implementing the wire rope in A4, the skilled person would choose the PI-R ropes disclosed in A5 [0005] as it is taught that these are sufficient for the intended use.



GOOD ATTACK TO CLAIM 5 (IV)

A skilled person is prompted to apply this teaching of A5 to that of A4 since A5[0007] teaches to use a wire assembly instead of external tensioning screws and A4[0005] mentions disadvantages of external tensioning screws. Suitability for epipelagic depths is mentioned in A4[0008] and A5[0010], so the teachings are compatible.

It follows that a skilled person would modify the device of A4 using the teaching of A5 and thereby arrive at a device having the features of claim 5 without requiring an inventive step (Art. 56 EPC).

Therefore, the subject-matter of claim 5 does not involve an inventive step over Annex 4 combined with Annex 5 and it does not comply with the provisions of Article 56 EPC.



PARTIAL PROBLEMS APPROACH (I)

- Allows to combine more than 2 documents for PSA
- When there are 2 (or more) differences between the CPA and the attacked object
- Comes up very often
- Basis: if the distinguishing features solve different problems which do not have anything in common (i.e., there is no synergy between the effects), they can be treated separately
- ***Attention if the same document discloses both the distinguishing features no reason for use the partial problem approach***



PARTIAL PROBLEMS APPROACH (II)

- Determine the differences from the CPA
- For each difference, determine effect
- Argue why the effects are independent, i.e., why there is no synergy or cooperation between the effects
- Determine the OTPs, treat the OTPs separately, i.e., continue with a separate PSA for each difference



ADDED SUBJECT MATTER ATTACK

- Explain why the claim has no basis in the application as filed.
- Compare the text of the application as filed with the text of the granted claim
- If also the relevant part of the description has been added after filing, the claim has nonetheless NO basis in the application as filed.
- **ATTENTION** the reference for a 123(2) attack is A1 as filed **NOT** the priority document!



CLAIM 6 – PART C(II)

6. A device according to claim 1 or 5 in which the elastomer contains 17 to 35 % by weight of RZCH.

I was now able to finalise my analysis of the file history of Annex 1, here is all the
25 relevant information:

Annex 1 claims priority of the applications NO20150000333 and
NO20150000355. NO20150000333 has the following parts of Annex 1:
paragraphs [1] to [11] of the description and figures 1 to 3. NO20150000333 has
30 only one claim and it is identical to claim 1 in Annex 1. NO20150000355 is
identical to the following parts of Annex 1: paragraphs [1] to [22], claims 1 to 5
and figures 1-5. Annex 1 was granted for European application EP16180339.8,
which was filed containing all parts of NO20150000355 and additionally
paragraph [23] of Annex 1. Claim 6 was added during examination.

2021/C/2/EN/1



added subject matter attack?

CLAIM 6 – PART C(II)

6. A device according to claim 1 or 5 in which the elastomer contains 17 to 35 % by weight of RZCH.



dependency on claim 1



elastomer of spacers
embodiment Fig. 3-4



dependency on claim 5



elastomer of sealing layers
embodiment in Fig. 5

[0011] Spacers 29 are arranged between the reservoir and the anti-buoyancy means.

The spacers are made from an elastomer to reduce the impact if the reservoir is inadvertently moved against the spacers, e.g. caused by underwater currents.

Preferably, the elastomer contains 13 to 47 % by weight of RZCH, a reinforcing fill

[0023] Alternatively, the elastomer comprised in the sealing layer according to claim 5 may contain 23 to 35 % by weight of RZCH. This content of RZCH is acceptable at greater depths where the increase in pressure allows for greater rigidity. This in turn will improve long-term stability against deformation and thus prolong the service period.

ATTACK TO CLAIM 6 DEPENDENT ON 1 (I)

Claim 6 dependent on claim 1, added during examination, defines a range 17 to 35 wt% of RZCH in the elastomer for the spacers. Par. [0011] of A1 discloses RZCH in the range 13 to 47 wt% for the spacers in the embodiment of Fig. 3-4, for the specific purpose of impact reduction.

The claimed range 17 to 35 wt% is not the same as (narrower than) 13 to 47 wt%.

RZCH in the range 17 to 35 wt-% is disclosed in par. [0022]-[0023] of A1 only in connection with the sealing layer 47 in the embodiment of Fig. 5, for the purpose of providing long term stability against deformation for the sealing layer.

ATTACK TO CLAIM 6 DEPENDENT ON 1 (II)

Since this narrower range is tied to a different part of the device (the sealing layer, not the spacers) and has a different purpose, it cannot be derived directly and unambiguously that this narrower range should also be used for the spacer in the embodiment of Fig. 3-4.

Thus, claiming the range of 17 to 35 wt-% of RZCH for a spacer extends beyond the content of the application as filed.

Therefore claim 6 when dependent on claim 1 contravenes Art. 100 c.

NOTICE OF OPPOSITION

- ✓ Identify the patent to be opposed and the opponent.
- ✓ Payment of the opposition fee has to be indicated.
- ✓ The intended opponent is the company and not the person signing the client's letter.
- ✓ All relevant information, a statement of the extent to which the European patent is opposed, opposition grounds, evidence, facts and arguments have to be in the answers.
- ✓ Features table are not awarded marks.



THANK YOU FOR YOUR ATTENTION!

