

OPINION UNDER SECTION 74A

Patent	EP 2309897 B1
Proprietor(s)	Fri-Jado B.V.
Exclusive Licensee	
Requester	Tandem Patents Ltd.
Observers	Fri-Jado B.V. c/o WijnstraWise Patents B.V. Victor Manufacturing Ltd c/o Mohun Aldridge Sykes Ltd.
Date Opinion issued	27 January 2021

The request

1. The comptroller has been requested to issue an opinion as to whether the patent EP 2309897 B1 is invalid due to any of: a lack of novelty; a lack of an inventive step; being insufficient; comprising added matter. A number of patent documents were cited regarding novelty and/or inventive step:

D1: EP 1460358 A1 - published 10 July 2003;
D2: US 3115019 - published 24 December 1963;
D3: EP 1508288 A1 - published 23 February 2005 (in German);
D4: WO 02/05689 A1 - published 24 January 2002;
D5: US 2004/226932 A1 - published 18 November 2004;
D6: US 3952609 - published 27 April 1976.

EP 2309897 B1 derives from a PCT international application initially published as WO2010/002243 A2 with a filing date of 2nd July 2009 and a declared priority date of 2nd July 2008. I note that the international search authority, who performed the international search, was the EPO. The patent was granted on 18th December 2019 and is currently undergoing the opposition procedure. The opposition was filed at the EPO on 18th September 2020 by Victor Manufacturing Ltd and appears to cover substantially the same ground as the request for this opinion. The opposition is pending at the time of issue of this opinion.

Observations

2. Observations on the request were received on behalf of the proprietor rebutting the invalidity and arguing that parts of the request should not be considered by the

opinion.

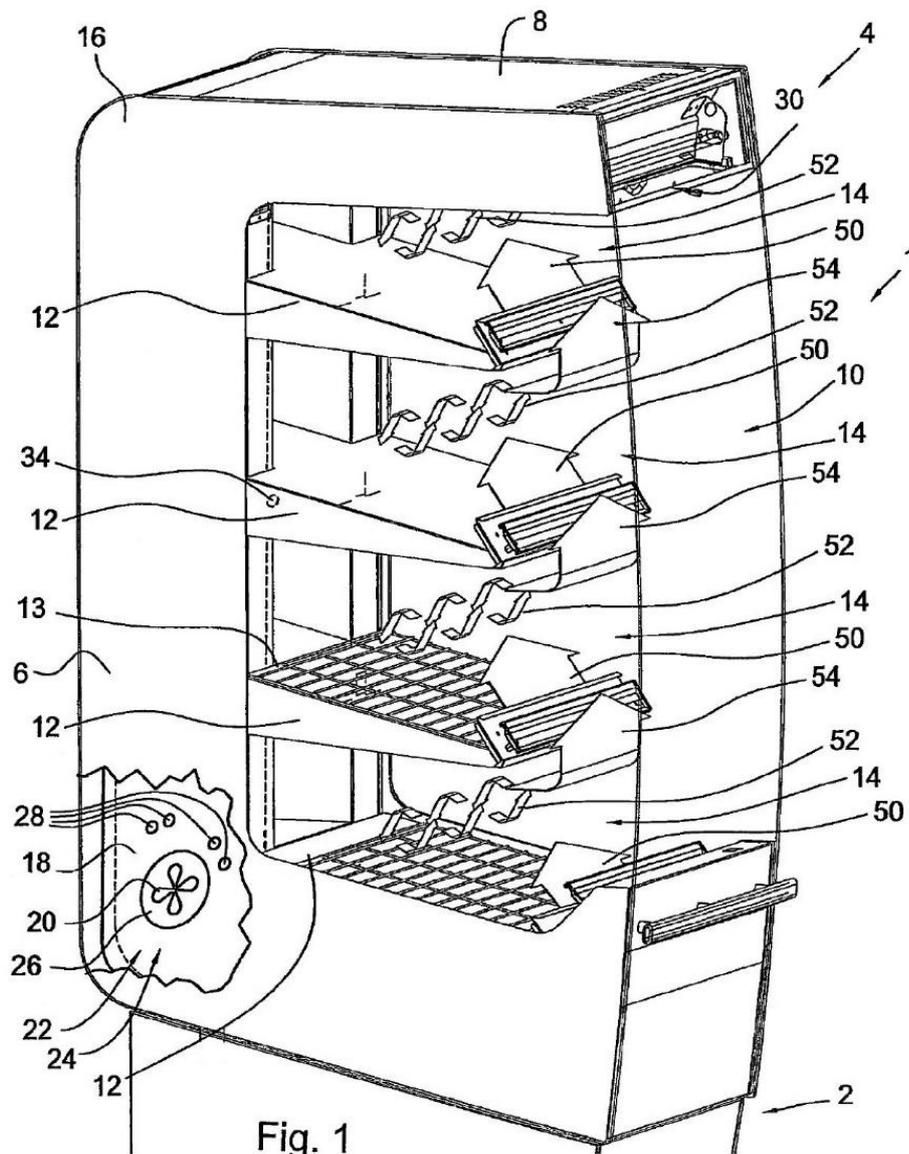
3. Observations on the request were also received on behalf of interested party Victor Manufacturing Ltd. which comment on the allowability of parts of the request in relation to document D1. They discuss what arguments have or have not been considered by the European Patent office during examination of the patent.
4. Observations in reply were received by the requestor which include reference to a lack of inventive step based on further patent documents not raised in the original request.

Matters to be considered by this Opinion

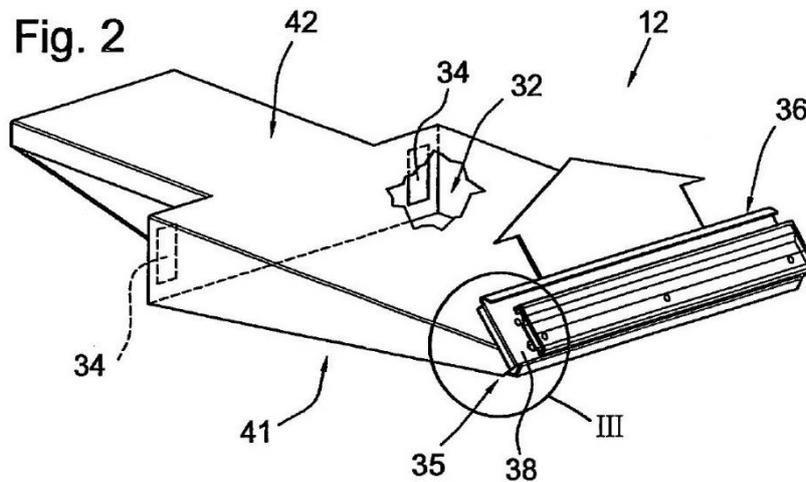
5. Prior to writing this opinion, my colleague in the Tribunals Section wrote to each of the three parties above on the 4th November 2020 stating that validity arguments based on D1 alone or in combination with common general knowledge will not be considered as D1 was cited in category X in the PCT international search report.
6. The request admits that document D1 was cited in the international search report and that document D5 was cited during examination at the EPO. It further states that document D6 was cited by the USPTO in relation to an equivalent US application, now abandoned.
7. In their observations, the proprietor also notes that D1 was cited in exam reports from the EPO and refers to oral proceedings there, where D1 was again cited. They argue D1 should not be considered in this opinion. I have inspected the prosecution dossier for the patent, available online at register.epo.org, and agree that this is the case, noting also that D1 was used regarding novelty and that D5 (listed as D2 in the oral proceedings) was used regarding inventive step.
8. The Observations from the other party argue that the request raised a new argument regarding D1, stating that they consider the minutes of the oral proceedings at the EPO show that the final amended version of the claims (that were granted) was not substantially reviewed and no proper assessment of the novelty of these final claims was made. They also argue that the points raised in the request are different to those made at the EPO; they note that the passages of D1 highlighted in the international search report do not include those relied upon in the request.
9. I am not persuaded that the request makes a new argument regarding D1, when considered by itself (the arguments comprising paragraphs 4 to 19, 53, part of 54, 61 and 64 of the request). Thus I will not give my opinion on lack of novelty in the light of D1 nor lack of inventive step given D1 and the common general knowledge.
10. I will however give my opinion in relation to the inventive step arguments that involve D1 being considered along with D2, D3 and D4 (arguments comprising paragraphs 20 to 31 and 53 to 56, 58 to 60 of the request.) I will only consider arguments about the dependant claims if I find the independent claims lack an inventive step.

The Patent - EP 2309897 B1

11. The invention is a heated display cabinet, particularly suitable for warm food, having shelves and an open front for access to the shelves. The cabinet is characterised by how hot air is circulated around the shelves. The figure shows an air intake 30 at the front top of the cabinet and several shelves 12 contained within a chamber 10 having top, bottom, rear walls and two side walls. The chamber has an open front. Air is circulated by a fan 20 and ducting such that air is drawn from the inlet and exits at outlets at the front edges of the shelves. The arrow 50 indicates that these outlets direct a flow of air both upwards from the shelf and backwards towards the rear of the chamber. The air then circulates in the storage space above the shelf as arrows 52 indicate. As the rear of the storage spaces are closed, the circulating air escapes from the storage spaces via the front. When the air is heated prior to the outlets, it subsequently heats items on the shelf, the circulation helping to heat the storage space. The air flow 50 is described as firstly providing a hot air screen, with a relatively slower subsequent air circulation 52 helping to heat items on the shelves.



12. Figure 2 below shows an embodiment of a shelf that has a hollow 'air discharge space' 32 with the air supply connected to openings 34. Outlet 36 (not visible) may be a slot and can work with angled flow unit 38, that may vertically cover the outlet, to help the air flow direction be rearwards.



13. An advantage of this arrangement is that the faster air screen flow, direct from the outlet, is not aimed straight at items on the shelf, such as warm food items. This means the food item quality may be protected. The gentler subsequent air flow that circulates the storage space is what heats the items. This is said to make it less likely that food will dry out or collect contamination and soft foods or packaging is less likely to dent from the impinging air flow.

Claim construction

14. Before considering the documents put forward in the request I will need to construe the claims of the patent following the well-known authority on claim construction which is *Kirin-Amgen and others v Hoechst Marion Roussel Limited and others* [2005] RPC 9. This requires that I put a purposive construction on the claims, interpret it in the light of the description and drawings as instructed by Section 125(1) and take account of the Protocol to Article 69 of the EPC. Simply put, I must decide what a person skilled in the art would have understood the patentee to have used the language of the claim to mean.
15. Section 125(1) of the Act states that:

For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.

16. And the Protocol on the Interpretation of Article 69 of the EPC (which corresponds to section 125(1)) states that:

Article 69 should not be interpreted in the sense that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Neither should it be interpreted in the sense that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patentee has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patentee with a reasonable degree of certainty for third parties.

17. There are two main independent claims, claim 1 to apparatus and claim 11 to a method :

1. Heating display unit for storing and displaying heated goods wherein the display unit (1) comprises walls (4), multiple shelves (12), an air duct (22, 24, 32), an air forcing apparatus (20) and air temperature regulating means, in which

the walls (4) comprise a bottom, side walls (6), a top wall (8), and a rear wall,

at least part of the walls (4) is at least partially double-walled,

at least part of the walls (4) of the display unit delimit a chamber (10) including an open front side, wherein

the chamber (10) is enclosed on five sides by the inside of the bottom, side, rear and top walls;

the multiple shelves (12) each comprise an upper placing side (42);

the multiple shelves (12) each extend substantially horizontally in the chamber (10) and are provided above each other to define an individual storage space (14) above each shelf (12);

the air duct (22, 24, 32) extends from an inlet opening (30) to multiple outlets (36) in which the outlets (36) are positioned at front edges (35) of the shelves wherein all the outlets (36) define a flow direction (50) of a generated air flow;

at least one outlet (36) per storage space discharges into the corresponding storage space (14) wherein a flow direction of the at least one outlet (36) points away from a corresponding placing side (42) to the rear such that the generated air flow is directed substantially entirely into the corresponding storage space (14),

characterised in that

each storage space (14) is closed at the rear by the inside of the rear wall such that the generated air flow turns around in the storage space and leaves the storage space at the front side of the storage space.

11. Method for heating products in a storage or display unit with hot air, comprising the steps

providing a heating display unit (1) wherein the display unit (1) has a rear wall and side walls and wherein the display unit comprises at least one hollow shelf (12) wherein a storage space (14) is formed on top of the shelf

*(12) for the storage of products,
providing products on the hollow shelf,
guiding an air flow through the hollow shelf (12) from the rear to the front
and supplying the air flow to the storage space (14) from a front edge (35) of
the shelf (12), characterised, in that
substantially the entire air flow supplied to the storage space turns around
and is discharged at the front side of the storage space,
whereby the air flow passes through the storage space from the front to
the rear and again from the rear to the front, and
wherein the circulating hot air heats the products on the shelves through
transfer.*

18. In general there are no major problems of construction in claim 1. There is however disagreement between parties regarding the scope of claim 11.
19. Firstly, I note that Claim 1 states that ‘...a flow direction of the at least one outlet (36) points away from a corresponding placing side (42) to the rear...’. I agree that away from the placing side (top surface of the shelf) means that the direction will be generally upwards and neither downwards onto the shelf nor across the top surface of the shelf.
20. In the Request, it is argued that claim 11 does not include the limitation that the outlet is directed upwardly, away from the placing side of the shelf. The proprietor however argues that claim 11 does define the flow as upwards.
21. Claim 11, does not refer to the outlet direction explicitly, but I agree with the proprietor that such an upward direction is necessarily implied by the claim. This is because saying a shelf has a storage space above it and secondly saying that this shelf also supplies air to this space from a front edge only allows for an upward direction for the air flow. It is also clear from reading the whole disclosure that this should be the way to read the claim; There are no examples given of the flow direction being other than this.
22. Also, I consider that the flow direction of the shelf outlet in claim 11 must also be read as causing the flow to be at least partly directed towards the rear of the storage as the final clause requires that ‘*the air flow passes through the storage space from the front to the rear...*’. I note the only disclosed way to do this is by a upwards and rearwards outlet direction that the embodiments show.
23. Finally, I note two things. Firstly there is slight difference in how the two claims are phrased, claim 1 states that “*that the generated air flow is directed substantially entirely into the corresponding storage*” whilst claim 11 states “*..substantially the entire air flow supplied to the storage space...*” which does not quite mean the same thing. I construe claim 11 to mean that not all of the air flow from the shelf outlet must enter the storage space. Secondly, claim 11 does not explicitly say the storage space is closed at the rear as claim 1 requires. Claim 11 does say that “*..substantially the entire air flow supplied to the storage space turns around and is discharged at the front side of the space...*”. which I construe to mean that the storage space is therefore substantially closed, including at the rear, with only the front side being open.

The Law

24. Section 3 of the Patents Act 1977 states:

An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

25. To determine whether or not an invention defined in a particular claim is inventive over the prior art, I will rely on the principles established in *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588, in which the well-known Windsurfing steps were reformulated:

(1)(a) Identify the notional “person skilled in the art”;

(1)(b) Identify the relevant common general knowledge of that person;

(2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;

(3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;

(4) Viewed without any knowledge of the alleged invention as claimed, determine whether those differences constitute steps which would have been obvious to the person skilled in the art.

26. Section 14 of the Act states:

...

(5) (3) The specification of an application shall disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by a person skilled in the art.

...

27. Section 76 of the Act states:

...

(2) No amendment of an application for a patent shall be allowed under section 15A(6), 18(3) or 19(1) if it results in the application disclosing matter extending beyond that disclosed in the application as filed.

...

Inventive Step

28. There are three arguments raised against claims 1 and 11 for being obvious; The combinations of prior art used are summarised as :

A). Starting with D1 and combining with D2;

B). Starting with D3 and combining with either of D2 or D4 *for claim 1*;

C). Starting with D3 and combining with either D1 or the common general knowledge *for claim 11*.

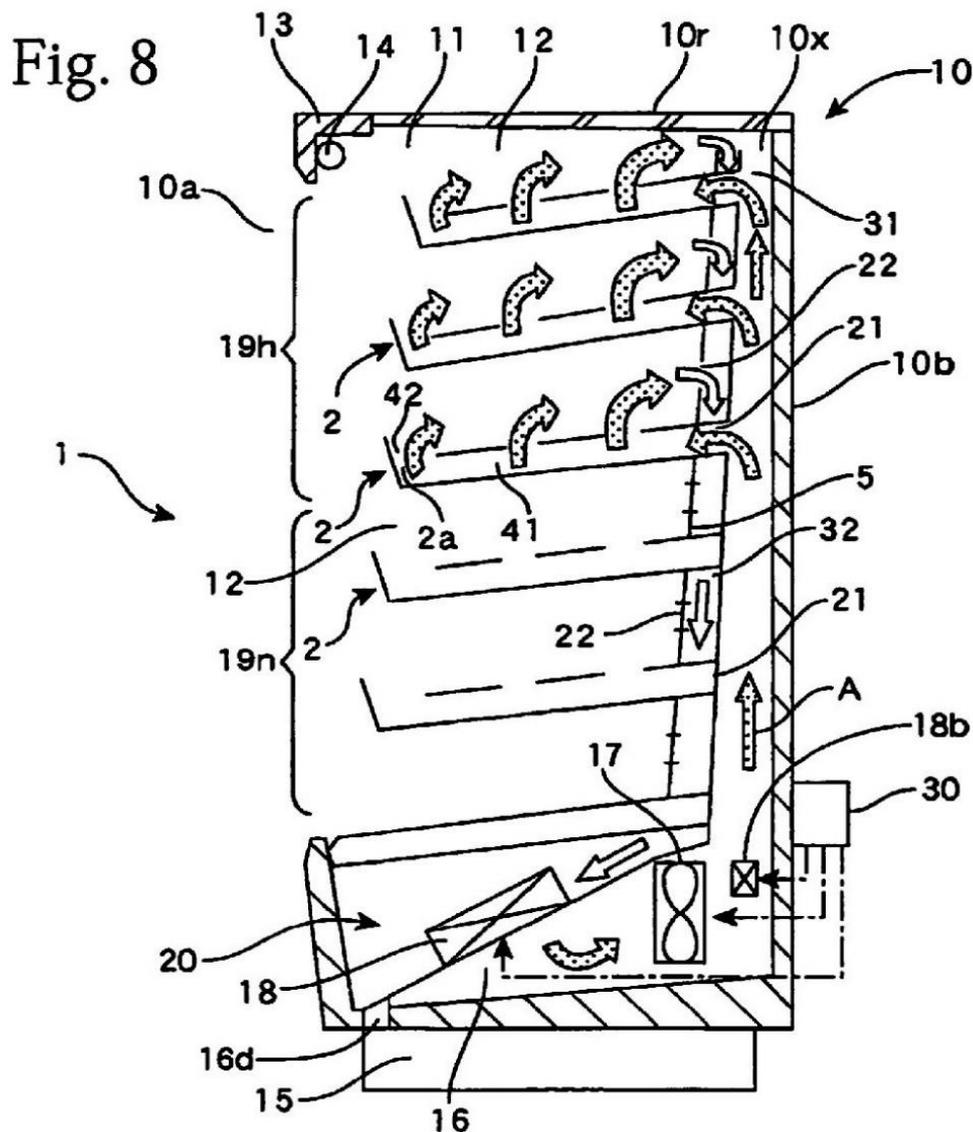
Each of the cited documents show display cabinets suitable for food items. The cabinets are enclosed on five sides and with internal shelves accessible from an open front side of the cabinet. I note that D1 shows a heated or cooled display cabinet with circulating hot and/or cold air, whilst each of D2, D3 and D4 are chilled display cabinets that circulate only cooled air.

29. To properly assess obviousness under UK law, consideration of the 'person skilled in the art' is needed and what their relevant common general knowledge is.
30. The request in paragraph 16 asserts the skilled person is '*experienced in the construction and operation of heated cabinets for heating and displaying food items to customers*'. It seems the proprietor does not disagree on this particular aspect. I agree that the skilled person will at least have that experience, but I note that they will also be aware that the means of heating can include the idea of actively circulating hot air.
31. Paragraph 16 however then goes on to say that '*construction and operation of cold air conditioning display units are also well known*', noting paragraph 5 of the patent that refers to prior art. They also assert that such cold display units '*are therefore equally relevant and citable...*'. The proprietor disagrees with this. Firstly, they note that paragraph 5 was added after filing and should be disregarded as any admission of what the common general knowledge might be. Secondly they state that the field of technology of the patent does not encompass heating and cooling, but is clearly only directed to a heated display and, arguing in terms of the EPO's problem-solution approach, that the skilled addressee would have no reason to look at documents about cooled displays for a solution to a problem with a heated display.
32. I agree that paragraph 5 of the granted patent should be ignored as this was added prior to grant to acknowledge prior art found during prosecution. As far as chilled air display cabinets, I consider that the skilled person will be at least aware that they exist, and that there will be some common technical features which might be relevant to both chilled and heated display cabinets. I will discuss later the relevance of documents D2 to D4.

A). D1- **EP1460358 A1** *combined with* D2- **US3115019**

33. Document D1 has various embodiments of an open-front display case with several shelves that can each have 'conditioned air' selectively supplied to their storage spaces. Hot and/or cold air can be used to heat and/or cool food items in these storage spaces. In each embodiment the shelf for holding food items is hollow forming ducting that can receive air at the rear of the shelf from supply ducting at the back of the cabinet. The air can be expelled from one or more outlets formed in the shelf to the storage spaces of the shelves.
34. I reproduce figure 8 below as this shows an arrangement for heating only an upper portion, region 19h, of the cabinet. Air A is heated by means 18 in the bottom of the

cabinet and routed into a hot air duct 31 via fan 17 to pass into a duct at the rear of the cabinet which links, via hot supply ports 21 to each of the top shelves in region 19h. The hot air passed through the hollow shelves to exit upwards through multiple outlets, include some at the front edge of the shelf. The hot air is directed upwards from the shelves to the storage region above that shelf. Exhaust ports 22 at the rear of each storage area collect the hot air and route it to an exhaust duct 32 at the rear that extends to the bottom of the cabinet to be recycled. In the lower storage region 19n dampers are shut for the both the air supply to the shelves and the return exhaust from the shelves. Port 16d at the bottom of the unit provides an air inlet for external air to mix with the recycled air in chamber 20.



35. Document D2 below shows a refrigerated display cabinet, with figure 5 showing an embodiment with various types of shelf with the arrows showing circulation of air. Outlets from the hollow shelves are fed from a first duct 52. Whilst figure 5 shows shelves with either upward or downward facing outlets, other embodiments are shown with only upward or downward facing outlets. Return inlets, at the rear of the storage spaces, feed a return air duct 54. As well as having different outlet directions, the shelves in figure 5 show other variations, shelf 64 for example has

cover 66 closing all the outlets in the shelf. Figure 6 shows detail of one of these shelves, with large slots 26 at the edge and smaller holes 22 along the shelf surface. The shelf inlet 20 passes through an aperture 38 in the rear wall 12 of the unit.

Fig. 6

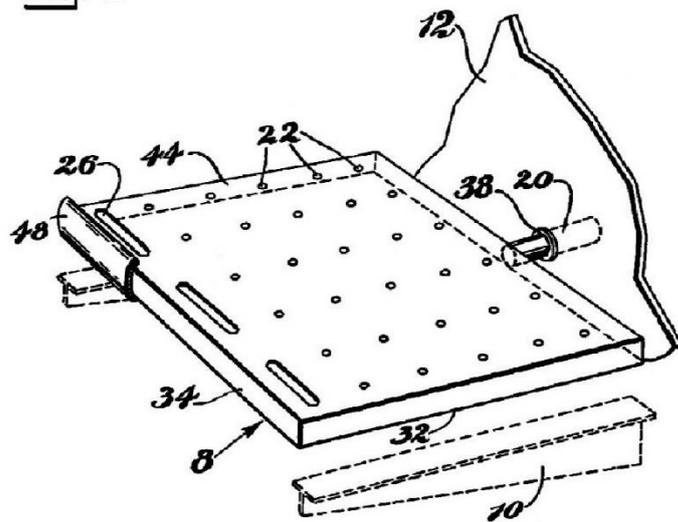
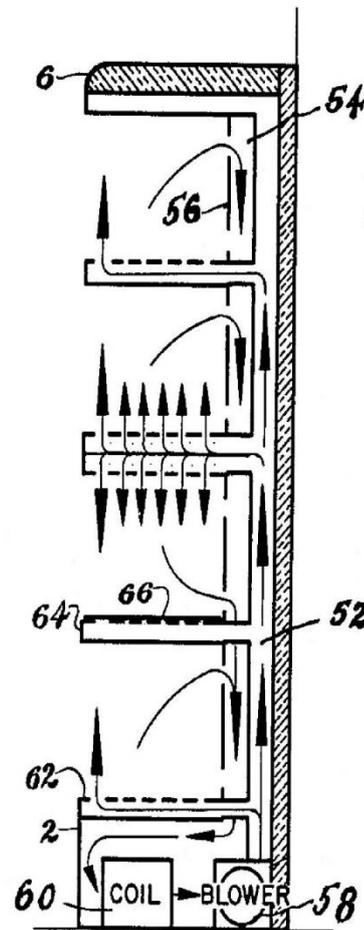


Fig. 5



36. The request states that invention of claim 1 has two main features :

- 1). The airflow direction from the shelf outlet point away from the placing side of the shelf and towards the rear wall of the storage space;
- 2). The rear wall of the storage space is closed.

Regarding inventive step, it is argued that if feature 1 is not shown by D1, then it is obvious. The request thus considers the difference between the inventive concept of claim 1 and the disclosure of D1 to be this feature 1. The request goes on to argue that feature 1 is disclosed in document D2 and the skilled person would readily add this feature of D2 to the unit disclosed by D1. They state that D2 discloses a shelf where the major portion of the air is expelled from the large openings 26 at the front.

37. I find that these two features, as the request defines, are not completely independent, but are linked as they function together to provide the inventive concept of claims 1 and 11. It is therefore potentially misleading to consider them in isolation. In the claim construction section above, I state that both claim 1 and claim 11 require that air flow into the storage space from the outlet at the shelf edge is both upwards and rearwards. Further both claims also require the storage space be

substantially closed at the rear such that the air flow turns around and exits from the front.

38. The proprietor argues that, as the invention is about a heated cabinet, when reading D1, the skilled reader would not consider reading D2 as this is directed to a cooling cabinet. They state that the invention is about solving a problem specific to heated cabinets (such as food drying out), and the skilled person will not consider a solution to be found by looking at cooled cabinets. They say there is no reason for the skilled person to combine D1 and D2.
39. In reply to the observations, the requestor argues that D2 is relevant because the inventive concept is about achieving a desired air flow direction within the storage space. The issue of controlling air flows is something that both a heated cabinet and a cooled cabinet are concerned with. They state that the skilled person will be familiar with both heated and cooled cabinets and their common general knowledge includes air flow control techniques in general which can be applied equally to either.
40. The proprietor notes that D2 does not show a closed rear wall and that while the flow direction of the outlets is generally upwards, the resultant flow is only rearward because of the exhaust outlets provided in the rear wall.
41. I find that D2 shows at least upward flow direction, but that the subsequent rearward flow is to the 'open' rear such that at least part of the air exits the storage space from the rear via the exhaust ports. I find I agree with the proprietor; I do not think the reader of D1 would combine it with the disclosed shelf of D2, as they would not be motivated to look at documents such as D2.
42. The request does not discuss feature 2 when arguing inventive step from D1, but it does refer to it when discussing novelty from D1, in particular referring to paragraphs 50 and 52 as disclosing it. The request argues that the supply and exhaust dampers are independently controllable, allowing the supply to be open whilst the exhaust is closed, thus disclosing feature 2. The Proprietor however argues that this is not disclosed, and that the supply and exhaust dampers are only operated together, either both being open or both closed. In observations in reply, the requestor notes paragraph 19 of D1 discloses that the unit is not limited to the airflow being sucked backwards by the exhaust openings 22.
43. Reading paragraphs 50 to 52 along with figure 5 (not reproduced here) I find that the supply damper and the exhaust damper are not described as mechanically linked for example, but seem to be separate with their own control levers. Later paragraph 55 and figures 6a-c also seem to show mechanically separate supply and exhaust dampers, but with an alternate type of control lever. I think that the skilled reader would understand that they could be operated independently, and that these can be separately controllable for each storage space. What the paragraphs say is that the temperature of a storage space can be controlled using the dampers. The noted paragraphs do not seem to state that you should operate the shelf to expel air to a storage space while the rear exhaust ports are also closed for that storage space.
44. Reading paragraph 19, I note these passages :

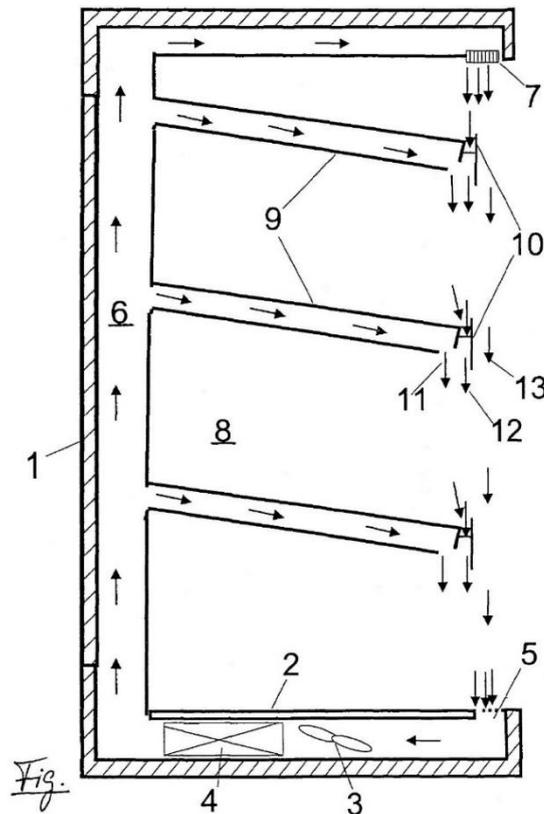
'... using display shelves than can be detachably attached to the inside of the display case part and making it possible to blow out and/or take in the conditioning air via a display shelf from the supply opening and/or exhaust opening when the display shelf has been attached ... Also, detachable display shelf that can blow out and/or take in the conditioning air is effective in flexibly constructing zones ...'

This seems to say that a shelf can be made to expel air into the storage space, or it can be made to suck in air from the storage space. I don't think this paragraph says that you should arrange to expel air from a shelf to a storage space while also closing the rear exhaust ports for that storage space.

45. Looking at D1, it seems a consistent feature for all the embodiments that the air is circulated from that which is collected, at least partially, via the rear exhaust ducting. In other words, D1 is described as operating to recycle the conditioned air using the exhaust ducting, that ducting provided at the rear of the cabinet.
46. Thus, I find that the requestors argument does not result in an arrangement that matches the inventive concept. The skilled reader would not consider modifying the unit of D1 to have shelves similar to that of D2. Even if that was the case, they would not consider operating the unit such that the multiple shelves have air directed from their front edges into a closed storage space above the shelf such that the air travels from the front to the rear and turns to exit the storage space from the front.
47. I therefore conclude that claim 1 is does have an inventive step and is not obvious over D1 when combined with D2.

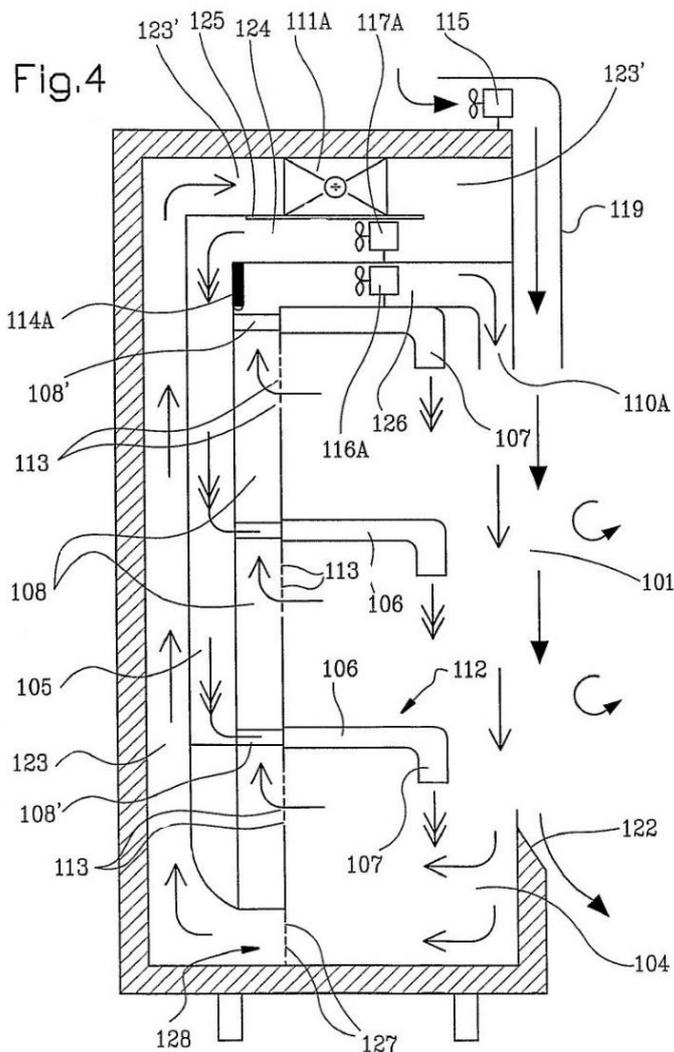
B). D3 EP1508288 A1 combined with D2 US3115019 or D4 WO02/05689 A1

48. Document D3 is an air cooled display case with an open front provided with hollow shelves 9. The only figure below has arrows showing the air circulation:



49. The unit has an inlet 5 feeding fan 3 and cooling means 4 to send chilled air up a duct towards the rear of the cabinet. The chilled air can then take numerous paths, the preferable embodiment being to provide all of the paths shown. The uppermost path ends at a downward facing outlet 7 at the upper front edge of the cabinet to provide a cold air curtain labelled 13 that substantially covers the open face of the cabinet. Intermediate paths are provided for the shelves, each ducting spur providing an outlet at a front edge of the shelf that is directed downwards. The shelf outlets form further layers 11 and 12 of the air curtain. The ends of the shelves have a baffle 10 that provides a channel helping to guide air from above, downwards into the region of the air curtain. The outlets are said combine together to provide an advantageously more stable cold air curtain, helping to keep the items on the shelves cool.
50. The disclosure of D2 has been summarised above; The request notes specifically that the shelves are disclosed as able to have outlets on the 'upper front edge'. Figure 5 above does clearly show how cold air outlets at the end of the shelves can point upwards or downwards.

51. Document D4 is another refrigerated display cabinet which shows a number of different embodiments in the figures. Figure 4 is shown below, where the arrows shows various air flow paths. I note that 111a is a cooling element that feeds cold air into duct 105 via fan 117a, and then through hollow shelves 112 to outlets 107.



52. The request notes lines 1 to 3 on page 16 D4, which I quote :

The nozzle(s) 107 is/are disposed in an angled, downward facing outlet portion of the shelf body 112; however this could also be directed upwards.

53. The request notes that D3 states ‘at least a partial flow of the cooling air curtain 11 is led into the region of the front of the product display shelves’ and that outlet 7 may be turned off, with the shelf outlets remaining. Because the storage space is closed, it seems to me that the skilled reader will understand that this partial flow will, at least partially, likely pass back towards the open front of the storage space.

54. The request argues that the difference between the invention of claim 1 and D3 is that the invention has the air flow from the shelf pointed away from the placing side and that the invention has air output upwards rather than downwards in D3. The request then also refers to the difference being that the outlet direction is both ‘away from the placing side of the shelf and towards the rear wall of the storage space’.

They then state it would be obvious to modify D3 such that the shelf outlets are *'on the upper front side of the shelf instead of on the lower front edge'*. They finally note that documents D2 and D4 are examples where a shelf air outlet may be either upwards or downwards, and argue that the skilled reader would consider modifying D3 to have the feature of an upward shelf outlet.

55. I note that it is not clearly stated by the requestor if D2 or D4 are considered to reflect the common general knowledge of the skilled reader, or if the skilled reader of D3 is expected to be motivated to seek out these documents.
56. The proprietor's observations note firstly that D3 is a refrigerated cabinet and not a heated one as the claims require. Secondly, they argue that D3 does not show a flow direction to the rear of the storage space. They also note that the request does not give a reason for motivating the skilled reader to want to adapt the flow direction shown by D3.
57. I disagree with the request's assessment of what the difference is between the inventive concept of claim 1 and the disclosure of D3; I think that the difference is greater than they state. Firstly, it seems the requestor considers that the inventive concept does not include the requirement for the display cabinet to be heated. This seems wrong to me as a chilled display cabinet as such is not suitable for heated goods or products as claims 1 and 11 require.
58. Documents D2, D3 and D4 are all chilled display cabinets and I do not think that the skilled reader, starting from D3, would be thinking of using the disclosure to produce a heated display case.
59. I disagree with the requestor's assertion that modifying the outlets of D3 to be upwards, instead of downwards, would result in the claimed air circulation. Claim 1 recites that the outlets are arranged so *'the airflow is directed substantially entirely into the corresponding storage space'*. Firstly, it seems the point of having the airflow pattern in D3 is to provide a cold air curtain arranged across the open face of the cabinet at the edges of the shelves which is why the flow marked 11 from the shelves is directed downwards to substantially join the flow marked 12 and 13. It seems to me that if one were to reverse the flow direction of D3, so that the air curtain is an upwards flow, you wouldn't meet the quoted requirement of claim 1 of having flow 11 entirely into the storage space.
60. It seems a moot point whether the reader of D3 would consider it obvious to have an upwardly pointing outlet such as demonstrated by D2 or D4, as it would not result in the invention of claim 1. In any case, I do not find the requestor's argument compelling on this modification of direction; They do not provide a persuasive argument as to why this would be contemplated. Further I find no motivation is given in the requestor's argument for the reader of D3 to consult either of D2 or D4. The request does not persuade me that the upward flow directions demonstrated in D2 or D4 would be common general knowledge.
61. I therefore conclude that claim 1 does have an inventive step and is not obvious over D3 when combined with D2 or D4.

C). D3 EP1508288 A1 combined with D1 EP1460358 or common general

knowledge

62. The request states that claim 11 does not have a requirement for the outlet being directed away from the placing side of the shelf, and thus asserts that the difference between the inventive concept of claim 11 and D3 is that the claim requires a heated display case, while D3 shows a chilled display case. They go on to assert that it would be common general knowledge to modify a cooling display unit to a heating display unit. They also note that D1 shows a display unit for heating or cooling food products.
63. The proprietor's observations state that the difference between D3 and the inventive concept must be more than that asserted; It must also include the fact that D3 shows an outlet direction that 'is vertically straight downwards'. They also disagree that claim 11 does not require the outlet to be directed away from the placing side. They note that the storage space is described by the claim as above the shelf and the claim also requires that air is supplied to the space from the front edge, and thus the airflow must be upwards into the storage space.
64. I have discussed the construction of claim 11 above and I disagree with the requestors reading of the inventive concept of claim 11 and agree with the proprietor that the inventive concept of claim 11 does include such an upward air flow.
65. I find that again I am not persuaded by the arguments in the request. Firstly, I am not persuaded that the reader of D3 would be motivated to seek out D1 to read, and thus it is not obvious that the skilled reader would read D3 along with D1. Secondly, I am not persuaded that the reader of D3 would think to modify the cooling cabinet shown to become a heated cabinet. Thirdly, even if D3 were so modified it would not be obvious to also provide outlets that pointed upwards rather than downwards.
66. I therefore conclude that claim 11 does have an inventive step and is not obvious over D3 when combined with D1 or the common general knowledge.

Dependant claims

67. The request argues that many of the dependant claims lack novelty or an inventive step.
68. All of these arguments that depend on document D1 by itself are considered to have been raised before the EPO during prosecution of the patent application. I will not give my opinion on those arguments.
69. The rest of the arguments against dependant claims allege a lack of inventive step. Since I have found that neither claim 1 nor claim 11 lack an inventive step, there is no need for me consider these arguments, as the claims will necessarily have an inventive step.

Sufficiency

70. The part of the request titled 'Lack of Clarity' (paragraphs 33 to 46) argues that the

invention is not described clearly and completely enough for the skilled person to enable to claimed invention. This is generally known as sufficiency and is defined by Section 14(5)(3) of the Act.

71. The first argument in the request seems to be that two passages in the original filing contradict the rest of the patent to such an extent that it *'...renders the skilled person in doubt as to what are and what are not essential features of the claimed invention'*. The parts of the original PCT applications description they refer to are quoted below; page 2 lines 14-15 :

In an embodiment of the display unit according to the invention the storage space is closed at the rear. Preferably, the storage space is only open at the front side. ...

and page 7 lines 9 to 11 :

.... The four shelves 12 together and with the inside of the rear wall define four storage spaces 14 for storing and displaying goods such as solid and liquid food. The storage spaces 14 are open towards the front for easy access for a user.

72. The request argues that these above passages implies that the bottom, top and sides of the storage space may be open or that there are gaps to the sides of the shelves. If there are gaps, then it is argued that the display unit would not be able to perform it's intended function. The request then goes on in paragraphs 40 to 45 to highlight perceived inconsistencies in terminology.
73. The proprietor's observations refute this argument essentially stating that the passages are actually consistent with the rest of the disclosure and claims. Further they note that sufficiency is a question of whether the patent specification, taken as a whole, enables the invention defined by the claims.
74. I entirely agree with the proprietor's rebuttal. I do not think any of the passages highlighted in the request cause any significant doubt or confusion for the skilled reader. The invention of the claims is clearly enabled by the specification. In my opinion, the skilled reader is taught how to work the invention.

Added Matter

Paragraphs 47 to 52 of the request refers to 'added matter' with arguments that essentially compare the scope of the granted claims to the application as filed. Thus I will consider if the granted form of the amended claims extend the disclosure of the patent beyond that of the original filing according to Section 76(2) of the Act.

75. The arguments in paragraphs 47 to 51 of the request allege that the granted claims 1 and 11 both omit essential features and thus the claims have a scope that can encompass variations which are not described in the original application and which would not achieve the required inventive effect.
76. One argument is that the granted claim 1 has a scope allowing gaps around the

shelves.

77. Another is that the final characterising part of claim 11 is a definition by result and does not specify the outlet direction is both upward and towards the rear of the storage space. They note that claim 1 does specify this direction.
78. The proprietor's observations state that the granted claims are supported as they are derivable from the application as filed and thus do not add matter. They note that the arguments about missing essential features and claim 1 having a definition by result are not relevant to the question of added matter.
79. I agree with the proprietor. There is nothing in claim 1 that the skilled reader would learn in addition to what was originally filed. As I explain above, I consider that claim 11 should be construed as requiring the outlet direction to be upwards and rearwards.
80. I do not find that the wording of the granted claims extends the disclosure of the granted patent beyond what was in the application in the form it was originally filed.

Conclusion

81. I have not given my opinion on the novelty of claims 1 or 11. I have found that claims 1 and 11 both have an inventive step and are not obvious. I have found that the patent does enable the invention and it does not lack sufficiency. I have found that there is no added matter.
82. I conclude that claims 1 and 11 are therefore valid.

Gareth Lewis
Examiner

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.