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SAMPLE SCRIPT A

This script has been supplied by the JEB as an example of an answer which achieved a pass in the relevant paper. It is not to be taken as a "model answer", nor is there any indication of the mark awarded to the answer. The script is a transcript of the handwritten answer provided by the candidate, with no alterations, other than in the formatting, such as the emboldening of headings and italicism of case references, to improve readability.

Construction

Claim 1

1.1 *A method of manufacturing* – claim 1 is directed towards a method and therefore covers the method and the direct product of that method.

1.2 *Hose* – does hose provide any limitation over for example tubing or tube or conduit. There is an implication by the examples used in the patent A that a "hose" is some form of flexible pipe. This is also what I would understand to be the usual meaning of hose. However, there is no specific reference to the hose being flexible, and it could be considered unduly limiting to require that the hose is flexible. The patentee could reasonably expect the claim to cover a rigid hose, and I feel that it would be reasonable to do so. Therefore I construe hose to be any type of pipe.

1.3 *For connecting…* - for means suitable and does not introduce any use requirement.

1.4 *the method comprising* – comprising takes its usual meaning that the method could include additional steps.

1.5 *length of tubing* – tubing has been used here instead of hose. It is to be presumed that the tubing is not identical to the hose

1.6 *heat conducting means* – the description allows for the invention being "put into practice in a number of ways" (p5 para 6), but the only heat conducting means suggested is the use of electrical wire. As this is the limitation of claim 2, heat conducting means should be constructed more broadly than this, and would be expected to include other standard heat conducting means, such as tubes of heated water.

1.7 *means of securing* – it is not clear what is intended by the means of securing. In the example given in A, the means of securing is the electrically insulating sleeve, which can be any non-conducting material such as PTFE including insulating tape. This should be included as one of means of securing. However, A also discloses the possibility of winding the heating element around the tube while the rubber is uncured so that the subsequently applied electric current also cures the rubber with the wire partially embedded, thereby fixing the wires. Clearly therefore, the means for

fixing must also include the possibility of the tube itself acting as the means for fixing. I therefore construe means for fixing as being any means for keeping the heating means in place, which may include the tube itself.

1.8 *tube* – tube is used instead of tubing, which is used earlier. These terms are intended to be the same, and I shall construe them in this way.

1.9 *means for protecting the heat conducting means* – in the example of A, the means for protecting is a braided metallic sheath, although this is specifically referred to as protecting against wear and tear rather than environmental conditions. Means for protecting should not be limited to the metallic sheath. It can be reasonably assumed that any layer which completely covers the conducting means would be suitable to act as a protective layer, as it would provide protection against wind, rain, etc., and some protection against abrasion and I would construe means for protecting to cover any such layer. Therefore, I would construe that the protecting means could also be any one of the insulating sleeve, or the outer skin.

1.10 *Environmental conditions* – On a first look at this term, I expected it to mean the weather, such that protection is against wind, rain, frost etc. However, it could alternatively mean the environment in which the tube is located i.e. inside a car, with the associated motion and wear and tear. From paragraph 3 p.7, I consider that this latter interpretation is actually the correct one, as it is wear and tear that the protecting layer is said to be protecting form.

Claim 2

Is clear

Claim 3

3.1 *Coiled arrangement* - Two different arrangements of the wire are given – a helical manner, and along the hose and back. Both of these arrangements could be described as coiled. However, p6 para 6 indicates that "wound as a coil" is "in the form of a helix". Therefore Claim 3 requires the heat conducting means to be a helical manner by my construction.

3.2 - Claim 3 is dependent on Claims 1 and 2, but the limitation of the coiled arrangement limits the type of heat-conducting means that can be used.

3.3 *Connected to the reservoir* – the claims is for a method of the producing the hose, but claim 3 requires that part of the hose is connected to the reservoir. This implies that there is also a connection which is not explicitly provided. The claim could either be constructed to require this step, or alternatively to consider that the end is for connection to the reservoir rather than being actually connected. The claim is directed to a method of producing a hose, and it appears to me that it should not be limited to requiring the connection step, and would be understood as being the end for connection.

Claim 4

4.1 *partially embedded* – the description clearly teaches how the heat conducting means is partially embedded when it is a wire. It is not clear whether other heat conducting means would be able to produce this effect in the same way (where the claim is dependent on Claim 1 via Claim 3).

Partially embedded clearly does not cover the situation where the wire is wholly embedded within the tube.

Claim 5

5.1 Claim 5 is for a washer system. System in this case can be seen to be an apparatus rather than a method.

5.2 The claim is essentially a reservoir, a washer nozzle and the hose made by the method of claim 1, the hose additionally has a means of connecting the heat conducting means to a power supply. The major construction issues were dealt with for Claim 1.

5.3 Claim 5, the heat conducting means is secured to the hose rather than to the tubing. I do not think this affects the scope of the claim.

Claim 6

6.1 Claim 6 is dependent on Claim 5 and includes a hose made by the method of any one of Claims 2 to 4. It is therefore equivalent to a number of separate claims.

Claim 7

7.1 Claim 7 is essentially three separate omnibus claims to the method the system and the hose.

Infringement

There are two potentially infringing articles, first the heated water hoses that are being supplied by the competitor, and second, the kit, also supplied by the competitor. I shall deal with each of these in turn.

Starting with the hoses, the competitor (C) is manufacturing these hoses, and is therefore potentially directly infringing your method claims under s60(1). In addition, as method claims cover the direct product of the process, C may well also be infringing the claims by selling the product.

The system claims may be infringed by the car manufacturers if they are making a system within the scope of claims. In addition, C may be a secondary infringer by virtue of providing means essential to make the system, resulting in infringement under s60(2).

Using the words of ***claim 1***, C is undertaking a method of manufacturing hose (const 1.2 – hoses are nearly identical) for connecting a windscreen washer reservoir to a windscreen washer nozzle on a vehicle (const 1.3 – intended for same purpose therefore suitable for), the method comprising providing a length of tubing with a heat conducting means (const 1.6 – electrical wire), means for securing the heat conducting means to the tube (const 1.7 – by my construction, may include the tube itself, which is the case here), and a new means for protecting the heat conducting means from environmental conditions (const 1.9, 1.10 – in this case, the wire is secured inside the tubing. Therefore, the only potential protecting means is the hose itself. It has to be decided whether the hose can be the protecting means. By virtue of having a tube and a separate hose, I would consider that the hose can act as both the tube and also the protecting means, and therefore this feature is present). Accordingly, by my construction, Claim 1 is infringed by C's tubing.

Claim 2 requires the heat conducting means to be electrical wire. C's tubing uses electrical wire and therefore also infringes claim 2.

Claim 3 requires the heat conducting means to be in a coiled arrangement. The client states that apart from the embedding of the wire, C's hose is identical. Therefore it can be assumed that the wire is in coiled arrangement, and runs along the whole length of the hose. By my construction 3.3 as connected does not require a connection step, Claim 3 also infringed by C.

Claim 4 – C's hose has a wire which is wholly embedded in the hose. However, I have considered that C's hose is made up of a tube, and separate protecting means. It could therefore be argued that the wire is only partially in the tubing, and partially covered by the protecting means. I do not think that this would be a fair interpretation of C's device, and therefore, Claim 4 is not infringed.

Claim 5 – Claim 5 is limited to the system. The hose has protecting means. Again, I consider that the protecting means can be the hose itself. It appears likely that the car manufacturers would provide a system having the reservoir and washer nozzle, and the hose does also have the connecting means. Accordingly Claim 5 is infringed by the car manufacturers.

Claim 6 – As claims 2 and 3 are infringed, Claim 6 will be infringed where it depends on these Claims. Claim 4 is not infringed, and therefore Claim 6 is not infringed where it depends on Claim 4.

Claim 7 – None of the hose, the method or the system resulting from C's hose are the same as the method disclosed in patent A, and therefore none of the omnibus claims are infringed.

Turning to the DIY kit, the kit can be added to standard tubes to produce a potentially infringing system. The method of making the hose is also potentially within the scope of the method claims, and the direct product of the method claims could also be produced. Direct infringers of the method claims are either the garage if they apply the kit, or the car owner (who has a defence under s60(5).). Direct infringers of the system claims are the car owners, again who have a defence.

The kit supplier could be a contributory infringer, as he is providing means essential to work the method and produce the system. The garage could also be a contributory infringer by selling the DIY kit.

I shall consider whether the application of the DIY kit infringes the method claims, and whether the resultant product infringes the product of the process or the system claims.

The method has only one step, which is providing the hose, and therefore is essentially equivalent to a product claim.

Using the wording of claim 1, by applying the kit to a tube, the applier is undertaking a method of manufacturing hose for connecting a windscreen washer reservoir to a windscreen washer nozzle on a vehicle (Const. 1.3 the hose is in pos^{n} so is suitable for…), the method comprising providing a length of tubing with a heat conducting means (1.6 – resistance wire), means of securing the heat conducting means to the tube (1.7 – adhesive packing) and a means for protecting the heat conducting means from environmental conditions (1.9, 1.10 – insulating tape).

Claim 1 is therefore infringed by a person applying the kit. C would be contributory infringers.

Claim 2 – the heat conducting means is a wire. Claim 2 is also infringed

Claim 3 – the wire in the kit runs lengthwise, and therefore is not a coiled arrangement – Claim3 is not infringed

Claim 4 – the wire in the kit is to be applied to the surface, and therefore is not partially embedded, therefore Claim 4 is not infringed.

Claim 5 – When the kit is applied, all of the features are present in a car, including the means of connecting the heat conducting means (connectors). Claim 5 is therefore infringed by the resultant car. The garage and C are contributory infringers.

Claim 6 – This claim is infringed only where it depends on Claim 2.

Claim 7 – Again, method, hose and system are different in the description of A to the result of using the kit. Claim 7 is not infringed.

Novelty

There are two prior art documents to be considered for novelty (and inventive step). These are patent C and document D. No prior art was mentioned in the preamble to Patent A.

Novelty over Patent C

Claim 1

By my construction (1.1), the hose of claim 1 could be any tube, and therefore the conduits of Patent Care hoses. The glass conduits are not suitable for connecting the windscreen washer reservoir to the nozzle, as they could easily break in the vehicle. However, the use in C of a rubber material is disclosed which would be suitable for use in vehicles.

There is however, no explicit disclosure in Patent C of a rubber hose with heat conducting means, means of securing the heat conducting means, and means for protecting the heat conducting means from environmental conditions. There is explicitly provided a glass hose with heat conducting means (const 1.6 internal tube 2), means for securing the heat conducting means (1.7 – the glass hose itself) and means from protecting the heat conducting means from environmental conditions (1.9, 1.10 – insulating jacket). All features are present, except not being suitable for…

Claim 1 is novel over Patent C.

Claim 5

There is no disclosure in Patent C of the washer system, and therefore claim 5 is novel over Patent C.

All of the dependent claims are also novel.

Novelty over Doc. C

Claim 1

Document D relates to retro fitting of trace heating layers to pipes. Document D discloses the method of manufacturing hose, including rubber hose which could be suitable for use in the washer system which comprises providing a length of tubing with heat conducting means (1.6 – heater tape), means of securing the heat conducting means to the tube (1.7 – adhesive backing), means for protecting the heat conducting means from environmental conditions (1.9, 1.10 – insulating jacket).

Claim 1 is therefore not novel over Doc. D.

Claim 2 requires the use of electrical wire. This is also disclosed in Doc D and therefore is not novel.

Claim 3 – requires the heat conducting means to be a coiled arrangement (3.1 – can also be wound helically), adjacent the end connected to (3.3 – no explicit disclosure of attaching to an end of the tube) the reservoir. Claim 3 is novel over Doc D.

No disclosure in Doc D of partially embedded therefore ***Claim 4*** novel over Doc D.

Claim 5 – Doc D does not mention a washer system therefore claim 5 novel over Doc D, ***Claim 6*** also novel.

Inventive Step

If I had more time I would consider the i.s. of ***Claim 1 – 2*** over Patent C. It appears unlikely that Claims 1 and 2 would be inventive. However, as I have considered the claims to be novel, I will not consider i.s. for these claims.

Claim 3 Claim 3 is novel over Doc D only because it does not explicitly disclose providing the heat conducting means adjacent and end of the hose. There can be no inventiveness in this, and accordingly Claim 3 is not inventive over Doc D.

Claim 4 Claim 4 provides the additional feature that the conducting means is partially embedded. There is a clear manufacturing benefit in this production step, which allows the heat conducting means to be applied to an uncured hose, and then heated to cause curing with the means partially embedded such that it is held in place. This prevents the additional requirement of adhesive, or the more difficult step of inserting the means inside the tube. There is no suggestion of this in either Pat C or Doc D, and therefore Claim 4 is inventive over either of these documents, alone or in combination.

Claim 5 Claim 5 is a separate independent claim to the washer system.

Patent C

Patent C suggests that the conduit is useful for maintaining the temperature of a gas as it passes from one place to another, and in particular to prevent condensation. The person skilled in the art would not have reason to consider that the conduit could be used for fluids, and in particular to be of benefit for preventing liquid from freezing in the conduit. Even if the use with liquids was considered, the person skilled in the art would not anticipate use of the conduit in a car washer system. Claim 5 is therefore inventive over Patent C.

Document D

Document D discloses the use of heated wires in a number of situations, and in particular in the "water industry". The recommendation in this document is that the system can be used in frost protection in order to produce pipes in which the water does not freeze, even in sub zero temperatures. It is clear that this teaching could be applied to any form of piping, and therefore could easily be used in washer systems in cars. Indeed, in the 3rd paragraph, page 12, it is stated that very few operations could benefit from some form of electrical trace heating. Therefore, it could be argued that it is obvious to use trace heating in a washer system from Doc D, and therefore Claim 5 is not inventive. Conversely, it could be argued that the field of water heating is not the same as the field of windscreen washers in cars, and the person skilled in the art would have no reason to have considered or known about Doc D. Arguments in favour of this include the fact that trace heating has been known for some time, and yet it has never been applied to car washer systems. However, Trace heating was cited by the Examiner in the original search report, and so it could be argued that it is in the correct field.

Overall, I would consider that trace heating is not in the correct field, and that the inventive step made by the client is that it could be applied to tubing in car washer systems to advantageous effect. I therefore consider Claim 5 (an therefore Claim 6) to be inventive over Doc D.

There is nothing in the combination of the two documents that leads me to conclude that Claim 5 is not inventive.

Omnibus Claims

I consider these to be inventive as they include the partial embedding of claim 4. However, they are not infringed, I have not considered them closely.

Letter to Client

Dear Sir,

I have considered the issue of infringement and validity of your patent GB2000000.

My conclusion is that at present, your patent is only partially valid, as claims 1 to 3 are not novel of not inventive over Patent C or Document D (copy enclosed herewith). However, I conclude that Claims 4, 5 and 6, as well as omnibus Claim 7 are both novel and inventive over the prior art.

In relation to infringement, I consider that Claim 4 is not infringed.

I consider that Claim 5 is infringed by car manufacturers using the hose of C, and also by the car owners of these cars, and cars that are retrofitted with the DIY kit. C are contributory infringers for both products, and the garage is a contributory infringer for the kit.

As the patent is not currently valid, I would recommend that we try to amend the patent so that it is valid by application to the Comptroller at the Patent Office. Obviously the main prior art has only just come to light, and therefore we can argue that we can reasonably get discretion to amend, as the patent was formed with skill and knowledge, and there was not covetous claiming.

If we can obtain an amended patent, I consider that it would be valid, and you may be able to take action against C, the car manufacturers and also the garage. Please be aware that it could be found that Claims 5 and 6 are not valid, in which case the patent would fail. In particular this could occur if it were decided that Doc D is in the correct field, and should be considered for inventive step.

Once we have amended the patent, you should return to C, as well as writing to the car manufacturer, warning them of potential infringement action.

A possible additional amendment that could be made would be to introduce a further claim to include the switch to activate the heater. This could have additional inventive features, and may be useful if it is used by the car manufacturers.

I hope that this is of assistance to you.

Perhaps you would like to give me a call so that we can discuss the issues involved in my conclusion more closely

Yours faithfully

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SAMPLE SCRIPT B

This script has been supplied by the JEB as an example of an answer which achieved a pass in the relevant paper. It is not to be taken as a "model answer", nor is there any indication of the mark awarded to the answer. The script is a transcript of the handwritten answer provided by the candidate, with no alterations, other than in the formatting, such as the emboldening of headings and italicism of case references, to improve readability.

Construction of GB2000000 (A)

Claim 1

A method of manufacturing – this claim relates to the method of making the new hose.

hose – this term seems clear and I will construe it to mean a conduit for transporting fluid. It includes, but is not limited to, "water conducting hoses" (Page 1 line 2 of A). The hose is not limited in length (Page 2 lines 18 – 19) and can be any diameter 5mm or less (Page 2 line 18).

for connecting… … on a vehicle – this term will be construed to mean that the hose is suitable for use in connecting the washer reservoir to the nozzle, but the hose is not limited to such a use.

The terms *"windscreen washer reservoir"* and *"windscreen washer nozzle"* are clear terms of the art, but it is noted that the term windscreen applies to both the front and rear windows of the vehicle (Page 1 lines 8 – 9) and it seems that the patentee intended the term to be broad enough to cover any element, such as headlights (Page 3 line 18) that are washed.

"Vehicle" includes a motor car (Page 2 lines 19 – 22), but also encompasses any motor vehicle.

providing a length of tubing – this term seems clear and will be construed to mean that a tube, which forms part of the hose, is provided. According to a normal English construction, a tube comprises a hollow conduit through which fluid can flow. The tube includes but is not limited to a synthetic or natural rubber tube (Page 2 line 15) and is of a length to allow it to operate, for example to carry fluid from a washer bottle to a nozzle (Page 2 line 19). The tube includes, but is not limited to tubes having an external diameter of 5mm or less (Page 2 line 18).

a heat conducting means – this will be construed functionally to include any means that enables heat to be transported. This includes an electrical wire, as stated in Claim 2, but also a tube that allows a heated substance to flow within it. The broad functional definition of this term is supported by the fact that it is later restricted to being a wire in Claim 2.

means of securing the heat conducting means to the tube - the means for securing will be construed broadly to include any means for fixing the heat conducting means to the tube as there

is no suggestion that the patentee intended this term to be narrowed. This includes any form of adhesive or clips and also includes the method described in A on Page 2 lines 30 to 35, in which the heat conducting means is embedded in the rubber as it is heated.

The heat conducting means may be secured to the tube in any configuration, for example helically or linearly along one side of the tube, and the term includes the heat-conducting means being connected to the outside or inside of the tube or being embedded within the tube.

However, the heat conducting means and the tube seem to be limited to being supplied to separate elements which are then joined by the means of securing. That is, the tube and heat conducting means are not formed together in the same step of manufacturing.

In the embedding example, the heat securing means merely comprises the heat generated in the wire and the material of the tube itself, hence the term of the claim includes this situation.

means for protecting……environmental conditions - the means for protecting are provided for the purpose of protecting the heat conducting means and not the tube.

This term includes the braided metallic sheath 16 of the embodiment described in A and the outer skin 18, however, these elements protect both the heat conducting means and the hose, so this term is not limited to such protective covers. The term will be construed functionally to include any element that protects or shields the heat conducting means. Such an element may form part of the means for securing or the tubing.

Environmental conditions will be construed to include any external condition that threatens the operation of the heat conducting means, for example, moisture, excessive temperature (hot or cold), corrosive substances, electricity.

This is a broad definition of the means for protecting term, and a Court may take a narrower view, but this broad interpretation seems justified as the patentee does not seem to have intended to limit the term to any particular embodiment.

Claim 2 (dep. on Claim 1)

the heat conducting means is an electrical wire – this term seems clear and limits the heat conducting means to being an electrical conductor in the form of a wire. As discussed above for Claim 1, this claim has a broadening effect on the "heat conducting means" of Claim1 since, in Claim 1, the heat conducting means must be broad enough to encompass more than just a wire.

Claim 3 (dep. On Claim 1 or 2)

provided in a coiled arrangement – this will be construed to mean that the heat conducting means is coiled generally around an axis substantially parallel to the longitudinal axis of the tube, either within or outside the tube.

along at least part of the hose – the coil of the heat conducting means covers at least some, but not necessarily the whole length of the hose.

adjacent the end connected to the reservoir – this term seems unclear since the reservoir, which will be construed to mean the windscreen washer reservoir has not been explicitly included in Claim 1 or 2. However, it will be construed to mean that the coil is provided around the end of the hose that is intended to be connected to the reservoir. The coil is provided close to, but not necessarily exactly at, the end of the hose.

Claim 4 (dependent on Claim 2 or 3 <u>not</u> claim 1)

partially embedded – this will be construed to mean that the heat conducting means is sunk into the surface of, but is not totally enclosed within, the surface of the tubing.

Claim 5

A heated windscreen washer system – This is a second independent claim directed to the whole washer system. As for Claim 1, I will construe windscreen broadly to include any part of a motor vehicle that is washed by a washer.

reservoir for windscreen wash… … washer nozzle… length of hose there between – these terms are clear terms of the art and seem unambiguous. The hose is defined further by the following terms.

heat conducting means – this will be construed more narrowly than in Claim 1 since Claim 5 further requires: *means for conducting the heat conducting means to a power supply* - hence the heat conducting means of Claim 5 is limited to an electrical heating element, for example as described on Page 1 lines 26 to 31.

means of securing… means of protecting… condition – these elements of the claim will be construed as for Claim 1.

Claim 6 (dep. on Claim 5)

manufactured by the method of Claims 2 to 4 – this term seems clear – the claim covers any system of Claim 5 with a hose manufactured according to Claim 2, 3 or 4. The claim does not include hoses manufactured according to Claim1, which reinforces the idea that the hose of Claim

5 must have an electrical heat conducting means, since this limitation is found in Claim 2 but not in Claim 1.

Claim 7 (Omnibus Claim)

Claim 7 is an omnibus claim so is limited by any statements of invention in the description or any stated objects of the invention. It includes features disclosed in the specification, particularly with reference to the drawings.

The claim is actually three claims. The first is a method as described, particularly the statement of invention on Page 2 lines 1 to 5, but may further include features, such as the embedding method described on Page 2 lines 30 to 35.

The second claim is to the system and is limited by the statement of invention on Page 1 lines 20 to 24, in which the power supply is explicitly limited to an electrical power supply.

Perhaps most usefully, however, the claim also relates to a hose itself as described and illustrated. This may be particularly useful for the patentee as none of the other claims relate to the hose per se. Omnibus claims are interpreted narrowly by the Courts, as discussed in the *Rayleigh v. Millar* and *Rotocrop* cases, so the hose claim is limited by any features that are presented as necessary features in the description of figures.

Hence the hose claim is limited by the features that are presented as being necessary on Page 2 lines 10 to 28. That is, the inner tube, which is long enough to extend from the washer bottle to the nozzle, the heating element in the form of a helix of resistive wire extending from one end of the hose to the other, and the insulating sleeve.

Further optional features included the braided metallic sheath (which "can" be provided – Page 3 line 7) and the outer skin.

Since omnibus claims are interpreted narrowly in general by a court, I believe that a Court would consider that the insulating sleeve has to be provided as a separate element from the tube, so I will use this construction.

However, it may be possible to argue that the sleeve may be provided as part of the tube or that a purposive construction could be applied so that the insulating "sleeve" could be construed to mean any insulating layer.

Infringement

Possible infringers include:

Competitor - supplying hoses to manufacturers
- selling DIY kits of heater strips and instructions

Garage - selling DIY kits with instructions to motorists

Private motorists - fitting the kits to their cars and using the system

Motor vehicle manufacturers - buying hoses from the competitor and fitting them to the system.

There are two potentially infringing items: the competitor's hoses and the garage's kits. I will take each item in turn and determine whether any actions in relation to each item are infringing any of the Claims of A.

The competitor's hoses:

Claim 1

The competitor seems to manufacture hose (I would check with the client that this is the case) and the hoses seem to be used in windscreen washer systems so are suitable for this use. A length of tubing is provided and the hose has an electrical wire, which falls within the construction of a heat conducting means. The means for securing is by embedding the wire entirely within the tube so, as in the example in Patent A, the means for securing in this case comprises the tube itself, but this falls within my construction of means for securing, so the competitor's tube has this feature.

According to my construction of means for protecting, any means that protected the heat conducting means itself was included. In the case of the competitor's hose, the tube in which the heat conducting means is embedded protects the heat conducting means, so the competitor's hose has this feature.

The competitor's hose seems to have all of the features of Claim 1, so the competitor seems to infringe Claim 1 in manufacturing the hose.

Claim 2

The competitor seems to use an electrical wire as the heat conducting means, so the competitor also seems to infringe Claim 2.

Claim 3

The client describes the competitor's hoses as "identical to mine", so it seems that there are also likely to use a coiled arrangement along at least part of the hose. Hence the competitor also seems to infringe Claim 3.

Claim 4

The competitor's heat conducting means is entirely embedded with the tubing, so is not partially embedded as required by Claim 4 according to my construction. Hence the competitor does not infringe Claim 4.

Claim 5

The competitor does not make or sell washer systems, rather it is the motor vehicle manufacturers who assemble the competitor's hoses into systems to sell them. At most the competitor is a contributory infringer of these system claims (claims 5 and 6). Alternatively, if we can show that the competitor and the manufacturers acted with a common design, they could be sued as being joint tortfeasors of the claim, if the system made by the manufacturers falls within the Claim.

Turning to the elements of Claim 5, the motor vehicle manufacturers make and sell a heated windscreen washer system with their cars. The system includes a reservoir, a nozzle and a length of hose, if it is fitted to a standard car. The hose supplied by the competitor includes heat conducting means, means for securing and means for protecting, as discussed above for Claim 1. In addition, since the competitor's system is electrical, the manufacturers must further supply means for connecting the heat conducting means to a power supply.

Hence it seems that the system manufactured and sold by the motor vehicle manufacturers infringes Claim 5.

Claim 6

Since the methods described in Claims 2 and 3 are infringed, according to my construction, the motor vehicle manufacturers also infringe Claim 6 when the hose is manufactured according to Claim 2 or 3, but not when it is manufactured according to Claim 4.

Claim 7

The competitor and motor vehicle manufacturer are infringing the method and system aspects of Claim 7 in as far as they are infringing Claims 1 to 6.

Turning to the hose aspect of Claim 7, the competitor's hose has a tube and a coiled wire, but does not seem to have a separate insulating sheath as required in my construction. Hence the competitor's hose does not fall within my construction of Claim 7.

The garage's kits:

The garage both supplies kits for private use and fits the kits onto cars.

Private users who fit the kits to cars are likely to have a defence of private, non-commercial use under section 60 (5) so their acts will not be considered.

Claim 1

When the garage fits the kits, they are performing a method of manufacturing. Additionally, in supplying the kits, both the garage and the competitor are possible contributory infringers of the method claim.

The hoses connect washer reservoirs to nozzles. The garage and competitor do not provide hoses, since these are presumably provided with the cars, however they do obtain the tubing from the car to fit the system, so seem to fall within this feature of the claim.

The garage and the competitor provide heat conducting means – the heating elements in their kits. The heating elements seem to adhere to the tubing, so the adhesive comprises means of securing according to my construction. Insulating tape is also provided, which also protects the heat conducting means, although this is not its primary purpose, which is to maximise heat transfer to the hose.

Hence the garage infringes Claim1 by fitting hoses and both the garage and the competitor infringe Claim 1 contributorily by supplying kits suitable for and intended for putting the invention into effect in the UK.

Claim 2

The heating elements of the kit comprise electrical wire – the *"resistance wire"* shown in the figure. Hence Claim 2 is infringed as Claim1.

Claim 3

I have construed coiled arrangement to mean coiled around, so the heating elements, which run longitudinally along the tube are not coiled, hence Claim 3 is not infringed.

Claim 4

The heating elements are adhered to the surface of the tubing so are not partially embedded hence Claim 4 is not infringed.

Claim 5

Only the private users own systems including the hose, however, the garage may infringe this claim by assembling their kits into such systems when they are fitted onto cars.

On the cars, the systems have windscreen wash, a washer nozzle and a length of hose. They have heat conducting means, means for securing and means for protecting, as described for Claim 1. the "connectors for power supply" shown on the figure also comprise means of connecting. Hence the system has all the element of Claim 5 and the garage is manufacturing the system by fitting the kits and hence is infringing Claim 5.

Claim 6

The kits infringe Claims 5 and 2, so Claim 6 is infringed when it refers to the method of Claim 2.

Claim 7

Refering to the hose aspect of Claim 7, the kit does not include the inner tube. Nor is the heating element of the kit in the form of a helix around the tube. An insulating sleeve is provided in the form of insulating tape. However, the tube aspect of Claim 7 is not infringed by the kit or by the kit in assembled form around the tube.

Validity

Novelty over C

Claim 1

C discloses two embodiments of a trace heater system – in paragraphs 4 and 5 of Page 1.

Both embodiments include providing a length of tubing – "the conduit" with a heat conducting means – the "longitudinal or helical tube formed within the glass" or the "electrical conducting wire". Both heat conducting means are attached to the tubing – the electrical wire is wound around the tubing and the tube is held in position within the tubing.

The electrical wire embodiment does not disclose any means for protecting the heat conducting means, but the tube embodiment discloses that the tube may be provided with an inert liner to separate it from the gas being transported.

Hence Claim 1 is not novel over the tube embodiment of C.

The clause "for" in Claim 1 does not provide novelty over C since it seems that both of the systems in C may be suitable for use in a windscreen washer system.

Claim 2

C discloses use of an electrical wire, but not in conjunction with a means for protecting the heat conducting means. Since it is impermissible to mosaic elements of different embodiments or disclosures together to determine novelty, Claim 2 is not fully disclosed in any embodiment of C so Claim 2 is novel over C.

Claim 3

C discloses forming the heat conducting means in a coiled arrangement for both embodiments – the "helical tube" formed in the glass conduit or the electrical wire being "tightly wound", however, C does not describe the heat conducting means in relation to a reservoir of a washer system, so Claim 3 is novel over C.

Claim 4

Neither disclosure in C has the heat conducting means embedded in the tubing – the heat conducting means is either totally within or totally outside the tubing, so Claim 4 is novel over C.

Claim 5

C does not disclose a windscreen washer system, since it is directed to trace heaters hence Claim 5 is novel over C at least because a reservoir for windscreen wash and a nozzle are not provided. Hence Claim 5 is novel over C.

Claim 6

Is novel over C by depending on Claim 5 and also by virtue of the fact that Claims 2 and 4 are novel over C.

Claim 7

C does not disclose the hose aspect of Claim 7 since, although C describes an inner tube, and an electrically conductive element wound around the inner tube, C does not further disclose an insulating sleeve. Hence the hose aspect of Claim 7 is novel over C.

Novelty over D

Claim 1

D discloses tape for winding around water pipes. D discloses providing tubing, the water pipes, with heat conducting means, the heater tape. The adhesive backing provides means of securing and the insulating jacket protects the heat conducting means from environmental conditions. Hence Claim 1 is not novel over D.

Claim 2

The heat conducting means of D are described as part of an "electrical trace heating" system, so are presumably electricity conductive, hence Claim 2 in not novel over D.

Claim 3

Page 2 of D describes how the heater tape can be wound around the water pipes, so it can be provided in a coiled arrangement. However, there is no disclosure in D of a reservoir, since it is not intended for a windscreen washer system, so Claim 3 is novel over D if it is interpreted to include the washer reservoir.

Claim 4

The heater tape of D is applied to the surface of the tubing so is not partially embedded. Hence Claim 4 is novel over D.

Claim 5

D does not disclose a heated windscreen washer system so Claim5 is novel over D at least because D does not disclose a system including a reservoir and nozzle.

Claim6

Claim 6 is novel by virtue of its dependency on Claim 5 and by virtue of Claims 3 and 4 being novel over D.

Claim 7

Referring to the hose aspect of Claim 7, D discloses an inner tubing, (the water pipe) a heat conducting element in the form of an electrical coil and a conductive sleeve (the insulating jacket), so the hose aspect of Claim 7 is not novel over D unless we also incorporate features such as the braided metallic sheath and outer skin.

Inventive step over C and D

Claim 1

Claim 1 is not novel over C or D and hence is not inventive.

Claim 2

Claim 2 is not novel over C or D so also does not add an inventive feature.

Claim 3

The novel feature of Claim 3 lies in the arrangement of the heat conducting means in relation to the reservoir of a windscreen washer system and it seems that there is inventive merit in this feature. Neither C or D discloses or suggests the use of a trace heater system in a windscreen washer system and at least the system of C would require some alteration, such as the addition of a protective coating, to allow it to be used in such a system.

The client could argue that at least some of the inventive step for this invention lies in realizing that a trace heater system could be used in a washer system for a vehicle.

Hence Claim 3 is inventive over C and D according to my construction, although the claim could be improved by explicitly stating the attachment to a washer reservoir as a feature of the claim.

Initially, this may seem like an obvious application of one technology to another field but the question of "why was it not done before?" should be raised and the client should argue that it is only with hindsight that the system seems obvious.

Claim 4

Neither C nor D discloses or suggests partially embedding the heat conducting means in the tube. Hence Claim 4 is inventive over C and D since this feature provides a particularly convenient method of securing the heat conducting means to the tubing.

Claim 5

The arguments raised for Claim 3 are also applicable to Claim 5. According to my construction, I believe a Court would consider Claim 5 to be inventive at least because it took an inventive step to apply a trace heater system to a windscreen washer system. Hence Claim 5 is inventive.

Claim 6 is inventive at least by virtue of being dependent on Claim 5

Claim 7

The hose aspect of Claim 7 does not seem to be novel over D, so further features would have to be included in the interpretation of this omnibus claim to make it novel and inventive.

Notes to the client

- Check with client when the garage started selling the kits – check it wasn't before the priority date of the client's patent
- Check with client whether the competitor manufactures the hose himself.
- Check with client that he did not disclose his own invention before he filed an application in 1998, particularly when he fitted the system to his car – this is probably not an enabling disclosure in itself.

Improve the client's position:

- Amend the claims of the application to include a claim to a hose per se – based on Claim 7 and the description.
- Amend the application to explicitly include the fact that the method and hose used in a windscreen washer system. This will mean that Claim 1 is valid. It would then not be necessary to further restrict Claim 1 to the coiled feature of Claim 3.
- Post grant amendment under section 27 is at the discretion of the Comptroller and reasons for the amendment must be given. One reason for amending at this time could be that document D has recently been uncovered which casts doubts on the validity of the present claims.
- Amending the claims as described would give the client a valid Claim 1 to the method, Claim 5 to the system and Claim 7 to the hose.
- Post-grant amendment under Section 27 is advertised and there is a 2 month period for oppositions, which your competitors are likely to try to use to prevent your amendments being allowed.
- As an alternative to Section 27 amendment, you could amend the patent under Section 75 if you sue any party for infringement and they then raise the defence of revocation of your patent. However, a Court is unlikely to be happy for you to amend your application at that stage so that the claims specifically cover your competitor's activities.

Advice on infringement:

- Although the competitor is likely to infringe amended Claims 1 to 3 in manufacturing the hose, it may be difficult to obtain sufficient evidence of the

competitor's manufacturing method to prove infringement. However, if we can show that the hose itself is new, the burden of proof will be reversed (section 100) so that the competitor himself will have to show that he is not using your method to manufacture the hose.

- Infringement of Claims 5 and 6. The motor vehicle manufacturers seem to infringe Claims 5 and 6 directly, but I would advise against suing these manufacturers since they are the customers for your own product.

- One possibility would be to sue your competitor for contributory infringement of Claims 5 and 6 under Section 60(2) they are supplying, in the UK, means essential to the invention, i.e. the hoses, when they know that the hoses are suitable for and intended for putting the invention into effect in the UK.

- A further possibility may be to sue one manufacturer for infringement of Claims 5 and 6 and to join the competitor as a joint tortfeasor. However, you would have to show that the two parties were acting with a common design and this requires more than there just being a buyer/seller relationship.

- As mentioned above, the garage would infringe amended Claims 1, 3 and 5 by fitting the kits and both the garage and the competitor could be sued for contributory infringement in supplying the kits for use in the UK. The fact that the kits are supplied with instructions will be useful in showing that the garage and competitor intended the kits to be used according to the invention.

- As an alternative to bringing any infringement action, you should try to negotiate with the infringers, particularly your competitor, to try to get them to take a licence. Any such negotiations will mean that a Court may look upon you more favourably in determine costs for any action and, if you can negotiate a settlement, this is likely to be much cheaper than bringing an infringement action.

- To show you competitor that you are serious about enforcing your rights, you could apply for an interim injunction against further sale of the kits and supply of the systems by your competitor. This may encourage the competitors to reach a negotiated settlement.

* * * * * * * * * *

2003 PAPER P6
SAMPLE SCRIPT C

This script has been supplied by the JEB as an example of an answer which achieved a pass in the relevant paper. It is not to be taken as a "model answer", nor is there any indication of the mark awarded to the answer. The script is a transcript of the handwritten answer provided by the candidate, with no alterations, other than in the formatting, such as the emboldening of headings and italicism of case references, to improve readability.

Construction

1. Claim 1

1.1 *A method of manufacturing hose* – normal meaning
- process to make hose

1.2 *for connecting a windscreen washer reservoir to a windscreen washer nozzle* – hose must be suitable to connect reservoir of windscreen wash (can be a washer bottle p5 2nd para) to the nozzle which can be on the front or the rear of the vehicle (p5 para 2). Therefore the hose must be capable of carrying windscreen wash between reservoir (any container) and the nozzle (for any windscreen front or back).

1.3 *on a vehicle* – normal meaning

1.4 *the method comprising* – including but not limited to

1.5 *providing a length of tubing* – the tubing can be of any length (p6 para 5) so that it's long enough to reach from washer bottle/reservoir to the nozzle. This would presumably differ in different types of vehicle and whether hose was to reach to front or back of vehicle.

1.6 *tubing*
- Different term to hose.
- Description tends to use tube or tubing to describe the inner tube (10) rather than the hose as a whole entity which includes the coil and optionally sheaths and braids. However in claim 5 the term hose is used instead of the corresponding terms tube/tubing in claim 1. For claim 5 to make sense (i.e. agree with the description) I will have to construe "*the heat conducting means to the hose*" as referring to tubing (as in claim 1). Therefore I construe a tube to mean the actual piping that is in contact with the windscreen wash and hose to include tubing and heating means (except in claim 5 wherein the 3rd mention of hose will be construed as meaning the tube).

1.7 *with a heat conducting means* – any way of heating the tubing using conductance, i.e. transfer of heat by direct contact with the tubing. No limitation that this has to be electrical (as claim 5 is so limited). It seems if the patentee wanted to limit to electrical conductance heating he could have

easily done so (as in claim 5, limited to a power supply) However, the only examples given are electrically heated hoses.

I construe this term to mean any way of heating conductive due to the strong indication from claim 5 that the patentee meant for it not to be limited to electrically heated.

1.8 *means of securing the heat conducting means to the tube* – as in 1.7 the tube is to be heated by direct contact with the heating means, therefore the heating means must be kept in contact (secured) to the tube. Use of the language "means for securing" indicates that any method eg gluing or embedding can be used.

1.9 *and a means for protecting the heat conducting means* –

- a means for protecting must be included (use of word and).
- any way of protecting the heat conducting means may be used. Description discloses a metallic sheet (16) for protection but there seems to be no good reason to limit to such a device.

1.10 *from environmental conditions* – normal meaning, seems to indicate anything which causes "wear and tear" on the hose (p7 para 3).

2. Claim 2

- all terms of claim 1.

2.1 *heat conducting means is an electrical wire*

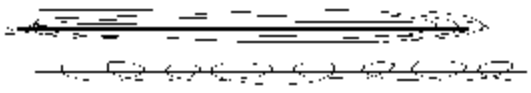
- reinforces my decision in 1.7 (p4) to construe heat conducting means as including more than just electrical heating.
- limits heat conducting means to an electrical wire, which takes its normal meaning
- no limitation to shape of wire, could be coiled or just longitudinal to tube. (claim 3 has a limitation to some coiling and is dependent on claim 2; therefore claim 2 must be broader.

3. Claim 3

- dependent in claim 1 or claim 2.

3.1 *heat conducting means is provided in a coiled arrangement* – when dependent on claim 1 this is any is any type of conductive heating, and must be coiled around the tube. (10).

- when dependent on claim 2 the electrical wire must be coiled around the tube (10).
- coiled indicates a wrapping around either around the core or around the tube shape and I construe it as such. eg:



3.2 *along at least part of the hose* – the heat conducting means need not be coiled along the entire length of the tubing, but must be coiled at some point.

3.3 *adjacent the end connected to the reservoir* –

- reservoir refers back to the windscreen washer reservoir in claim 1.
- a coiled part (or some of it) of the heat conductive means must be on the tubing next to the (attached to) reservoir
- does not exclude further coiling arrangements along the tubing.

Claim 4

- dependent on claims 2 or 3.

4.1 *heat conducting means is partially embedded in the tubing* – partially indicates the the heat conducting means does not have to be totally covered by the tubing material, function is to fix the wire in equidistant coils and prevent slipping when the hose is bent (p6 last para) Therefore if the heat conducting means is embedded far enough into the tubing to prevent slippage and fix the heat conducting means in the desired arrangement on the tubing this will fulfil the 'partially' requirement.

4.2 *embedded* – normal meaning.

Claim 5

independent claim

5.1 *A heated windscreen… comprising… and a length of hose there between* – apparatus which includes a windscreen wash reservoir (or any container suitable for holding windscreen wash), a washer nozzle and a length of hose which connects the reservoir to the nozzle. (see 1.6 for discussion on tubing vs hose).

5.2 *in which the hose is provided* with-in which the hose has the following features.

5.3 *a heat conducting means* – later in claim must be connected to a power supply which indicates this is limited to electrical heat conducting means.

5.4 *means of securing the heat conducting means to the hose* – heat conducting means (limited to electrical) kept in direct contact with the hose which I have construed to mean tubing (10) (see 1.6). see also (1.8) for *securing*

5.5 *a means of protecting… from environmental conditions* – no reason to give different construction to that discussed in (1.9 and 1.10) with regard to claim 1.

5.6 *and means of connecting heat conducting means to a power supply* – normal meaning, indicates heating means is electrically powered.

Claim 6

Same system as described in claim 5 but has to be manufactured according to methods claimed in claims 2 to 4. I think the reason for not being directly dependent on the method of claim 1 is that claim 6 req an electrically powered heating system (claim 5) and claim 1 includes other heating means which would not give the system as described in claim 5.

Claim 7

Omnibus claim directed to the methods, systems or hoses is described in the texts or drawings. Essentially limits to methods of making the hoses as described in Figures 1 to 3, systems including these hoses and the hoses themselves. Only claim which specifically covers the hoses as described in Figures 1 – 3.

nb
no mention of insulation requirement covered by electrically heated hose, is this because it is within skilled person's knowledge to realise it's required or is this an omission?

Infringement of GB200000

Competitor
- supplying heated water hoses to motor vehicle manufacturers.
- supplying DIY kits to garages.

Motor manufacturers
- connecting hoses to windscreen systems in cars and selling to motorists.

Local garage
- selling DIY kits to motorists.
- fitting and selling DIY kits to motorists

nb
motorists buying kits or cars including the competitor hoses/kits are exempt from infringement as they are private non-commercial users
Competitor's water hoses

- client describes them on p3 2nd para as identical to his except that the electrical wire is completely embedded on the rubber of the hose and lacks the metal sheath and outer reinforced rubber sheath.
- I need to ask client whether competitor is manufacturing these hoses or distributing them from the manufacture. For the moment I will consider that the client's competitor is also a manufacturer – as is my client. (if a different firm is making the hoses they will also be liable for infringement if the hoses fall within the claims).

Claim 1

Competitor (or the firm) must be making the hoses they supply to the vehicle manufactures, which are being used to connect a windscreen washer reservoir to a windscreen washer nozzle on a vehicle, the method comprising providing a length of tubing (under my construction this is any length required to connect the reservoir to the nozzle and capable of carrying the windscreen washer see 1.3 – 1.5), with a heat conducting means (in this case a coiled electrical wire, same as my clients), means of securing the heat conducting means to the tube (completely embedding the coil serves to secure the heating means to the tube (see 1.8) under my construction which covers any method for securing the heating means and a means for protecting the heat conducting means from environmental conditions (by totally embedding the electrical wire in the tube it is therefore protected from environmental conditions, my construction of protecting is not limited to sheaths or braids (see 1.9).

Manufacture of the competitors product has all the features of claim 1. Claim 1 is therefore infringed.

Claim 2

- all the features of claim 1 present.

Competitor product has an electrical wire as a heating means therefore claim 2 is infringed.

Claim 3

all features of claims 1 and 2 present

As competitor product identical to my clients, it must also have a coiled arrangement along at least part (can be along whole of tube under my construction (see 3.2) of the hose adjacent the end connected to the reservoir. It would be best to check with client that competitor product is coiled at end next to the reservoir but as he used the word identical I will assume it is for the time being. All features of claim 3 present when dependent on either claim 1 or 2. Therefore claim 3 infringed.

Claim 4

- all features of claims 2 or 3 present.

Electrical wire is completely embedded in tubing. My construction of partially, includes completely embedded.

Therefore claim 4 is infringed.

Claim 5

Once fitted to a vehicle the competitors product is part of a heated windscreen washer system, comprising a reservoir for windscreen wash, a washer nozzle and a length of hose there between in which the hose is provided with a heat conducting means (electrical coil), means of securing the heat conducting means to the hose (completely embedded in the tubing) a means of protecting the heat conducting means from environmental conditions (totally embedded in the tubing, see construction(see 5.5) which covers any means of protecting). and means for connecting the heat conducting means to power supply (must be otherwise electrical wire wouldn't work).

Therefore claim 5 is infringed by the fitting of the competitors product to vehicles (i.e in sits).

Claim 6

Competitor's product manufacture infringes claims 2 – 4 and the filled hose in the vehicle infringes claim 5. Therefore claim 6 is also infringed by the cars with the hoses filled.

Claim 7

None of the figures show a totally embedded coil, nor does the description explicitly describe totally embedded coils. Therefore, claim 7 is not infringed by the competitor product (hose), method of manufacture or in a system once in a car.

Summary

Competitor product's manufacture infringes claims 1 – 4. Fitting the product to the vehicles and selling them infringes claims 5 to 6

Claim 7 is not infringed.

DIY kits – made by competitor

Document B.

Claim 1

Provides a length of tubing (car manufacturer) with heat conducting means (resistance wire) means of seing the heat conducting means (adhesive backing see construction) to the tube and a means for protecting the heat conducting means from environmental condition (insulating wire to be wrapped round wire).

DIY kits infringe claim 1 when attached to a tube in a vehicle.

Claim 2

electrical wire present, claim 2 infringed.

Claim 3

Under my construction if coiled Doc B discloses a coiled arrangement which could be sited next to the reservoir end which if it is will infringe claim 3.

Claim 4

-No embedding in tubing - claim 4 not infringed.

Claim 5

when put together in car all elements of claim 5 are present therefore infringed

Claim 6

Infringed due to dependency on claim 5 and 2 – 4.

Claim 7

not infringed when referring to drawings.

Summary

The fitting of DIY kits to cars infringes claims 1, 2, 3, 5 and 6. Claim 4 not infringed, some of claim 7 infringed but not when drawings considered.

Validity of GB200 0000

Prior art

Trace heaters – known for many years, common general knowledge see 1st para clients letter.

Document C – US 5678910, issued Nov 1996

Document D – Electrical Trace heating for the Water industry – brochure with 1997 © therefore available before Feb 1998.

Document B – I need to ask client how long these kits have been available, they may be prior use. I think he might have mentioned it if there had but best to check.

Novelty

Document C

Claim 1

A length of tubing with a heat conducting means is provided (p10 last paragraph a tube and an electrical conducting wire), means of securing the heat conducting means (the electrical wire) to the tube (the wire is tightly wound around the tube p10 last para) but there is no means for protecting the heat conducting means from environmental conditions (wire forms the "outer tube"). This type of tubing when made from synthetic rubber (p11 1st paragraph) would be suitable for connection to windscreen reservoirs and nozzles.

The other embodiment in Doc C (p10 para 4) is formed from glass and would not be suited for the claimed purpose which requires a suitable non-breakable material.

Claim 1 is novel over Doc C as not all the features of claim 1 are disclosed.

Claims 2 to 4 will also be novel by virtue their dependency on claim 1. However I will consider the novelty of their additional features

Claim 2

Doc discloses an electrical wire as a heating means therefore not novel in it's own right.

Claim 3

Heating means (the wire) is tightly wound round the tube (p10 last para) which under my construction is a coil, no information on whether coil extends along entire length of tube, or whether it would be coiled next to reservoir end. I require more information on this point, but I think it likely that the wire is wound along the entire length of the tube and would therefore anticipate this claim's additional feature. Therefore claim 3 not novel in its own right.

Claim 4

No embedding of electrical wire in tubing, (tube wound around tube p10 last para) therefore when dependent on claim 2 this feature is novel in its own right. However when dependent on claim 1 (via claim 3), claim 4 is not limited to electrical wire and one embodiment in Doc C describes a helical heating element which can be embedded in an insulating form jacket. However, under my construction of tubing the insulating form jacket falls outside the meaning of tubing.

Therefore claim 4's additional features are novel in their own right over Doc C.

Claim 5

Doc does not disclose a heated windscreen washer system, there is no mention of windscreen wash reservoirs or washer nozzles. Therefore claim 5 is novel over Doc C

Claim 6

As the system of claim 5 is novel so is the system of claim 6 when made according to claims 2 – 4.

Claim 7

The method, system or hose are not disclosed in Doc C and claim 7 is therefore novel.

Document D

Claim 1

A method of manufacturing hose for (suitable for) connecting a windscreen washer reservoir to a windscreen washer nozzle on a vehicle (application of heat to all types of conduits, pipelines including water) the method comprising providing a length of tubing (under my construction any length to perform function see 1.5) with a heat conducting means (trace heating types, wires and cables should be included under my construction (see 1.7), mean of securing the heat conducting means to the tube (under my construction see 1.8), this would include adhesive backing). and a means for protecting the heat conducting means from environmental conditions (insulating jacket would perform this function under my construction see 1.10).

Doc D anticipates claim 1 as it has all the features of the claim.

Claim 2

Dependent on claim 1 which is not novel

The electrical wire of claim 2 is disclosed in Doc D (p12 last para) as being available for such a use.

Claim 2 is not novel.

Claim 3

Trace heater tape can be wound helically along water pipes (p13 1st para) however there is no teaching that this must heat the end adjacent to the water reservoir. Therefore claim 3 is novel over Doc D.

Claim 4

Doc D does not disclose that the heat conducting means is partially embedded (see construction 4.1), neither that the heating means be stuck on to the tubing.

Therefore claim 4 is novel over Doc D

Claim 5

Doc D does not disclose a heated windscreen washer system with windscreen wash reservoir or washer nozzle. Therefore claim 5 is novel over Doc D

Claim 6 is novel by virtue of its depending on claim 5.

Claim 7

- not novel when directed to methods of 1 – 2
- novel when methods of 3 and 4
- novel when system of claims 5 and 6.

Doc B

If there is a prior use of the DIY kits, they will anticipate claims 1, 2, 3, 5 and some of claim 7. see infringement section p21c.

Summary

Claims 1 – 7 novel over Doc C
Claims 1 – 2 not novel over Doc D
Claims 3, 4, 5, 6 novel over Doc D
Claim 7 'drawings' novel over Doc D
Therefore claims 3 – 6 novel

Inventive Step

Claims 3 to 6 have novelty under my construction of the claims.

The inventive concept of the patent is the application of of the trace heater principle to the windscreen wash tubing. The difference between claim 5 and the prior art being that the trace heating has been applied to the windscreen wash tubing in a car; between reservoir and nozzle. Although trace heaters have been known for years (see clients letter and Doc D) it hasn't until now been applied to windscreen washer tubes. There has been a need for a very great number of years to provide a solution to defrost windscreen on winter morning to take the frustration and hazard

out of waiting for the car screen to clear sufficiently. It could be argued that the person skilled in the art, a specialist in trace heating might progress from knowing about trace heating on other applications to applying it the windscreen wash problem. However, this hasn't happened and people have been aware of this problem for years. I think it would be easy in hindsight to conclude that the inventive concept was obvious but a lot of elegant solutions seem obvious once someone has invented them. I think the long-felt want of defrosted windscreen wash that has only been fulfilled by this invention means that a court would hold the inventive concept of the patent to be inventive. I think this is a stronger argument than any put forward from the prior art.

The closest single piece of prior art is Doc D which states that electrical trace heating will protect your operations from damage due to frost, but we're not looking at direct damage from frost we're looking at defrosting screen wash to clear a windscreen. Even this information would not motivate the skilled person to logically progress to a hose of the invention.

Combinations of C and D are possible as they're in the same technical field but this does not bring the skilled person to the invention, i.e trace heating on windscreen washer tubes.

Therefore claims 1- 7 would be inventive. However claims 1, 2 and 7 are not novel.

Amendment

Apart from not being novel, I don't think claim 1 is enabled by the description. Under my construction it isn't limited to electrical heating means and these are the only embodiments the spec describes. I think it goes beyond common general knowledge to provide a non electrical heat conducting means for use in this invention.

I think it is worth amending the claims by deleting claim 1 and making claim 5 the main independent claim. Then substituting claims 2 to 4 (dependent on claim 5 as they were in claim 6) for claim 6.

I would also amend claim 7 to a hose as described. This would mean that methods of making the system of claim 5 would still be protected and the limiting of claim 7 solves its validity issue as it would now be novel as hoses of the type in the drawings which have partially embedded wires are novel.

Advice to Client

Your patent as it stands is only partially valid. Claims 5 and 6 are valid, claims 1 – 4 and 7 (additional features not inventive to overcome claim 1's lack of novelty as mere workshop variations).

However, I suggest we apply for amendment as I have suggested to claim 5 and subsequent dependent claims. These amendments will be at the Comptroller's discretion however deletion of

claims as we propose rarely encounter problems. The amendments do not add matter (all subject matter present in the application as filed) and would not extend protection post grant. Therefore I see no reason why they should not be accepted.

I suggest that we apply for an interim injunction against your competitor for the contributory infringement of claim 5 by supplying their hoses to car manufacturers.

The car manufacturers are direct infringers but it would be easier to cease supply from source. There is a strong case that claim 5 is novel, inventive and infringed and that supply by your competitor is causing damage to your business. Injunctions are expensive but I see from your sales that it may be a route you'd be willing to take. Damages are awarded to plaintiffs with partially valid claims at full trial if there is an infringement. We can also apply for sale of the DIY kits to garages to also cease pending a full hearing.

On the balance of convenience a judge is likely to hold that if you can supply hoses to car manufacturers their business will not suffer unduly as they may not be aware of your patent. Your competitor is already aware of your patent and therefore can not be seen to be innocently infringing.

It might be worth pointing out to your competitor the fact that he is contributing to infringement of valid claims and seeing if he would be willing to take a licence from you. However, it seems that such a large market is involved it may not be possible to come to an amicable arrangement. When he became aware of the patent he could have sought a licence or applied for revocation of the patent ("so called clearing the way") however he chose not to. Indeed the speed with which his reply to your solicitor arrived I suspect he has been waiting for your reaction to his actions and in such a circumstance I believe we may need to go to court.

Usually if patents are held to be partially valid, amendment is required and we already have sensible amendments that could be made so that the whole patent is valid.

I suggest we don't sue the car manufacturers or garages as they are prospective customers. In fact offering license for the DIY kits may be a good idea as they don't directly affect your market, and your competitor may settle on this aspect. Of course if the judge views the DIY kits as a staple product and the instructions for their use as windscreen washer tube heaters are removed we cannot prevent their sale

nb
instructions to fit to washer tubes would be seen as inducement therefore they would be (the competitor) contributory infringers.

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