

2007 PAPER P6

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 rainwater catcher for a rainwater drainpipe” - this is clear in the context of the patent.

‘for’ = suitable for

Product claim so not limited by intended/stated use therefore any device suitable for catching rainwater in a down pipe.

1.2 “comprising” = including, but not limited to

1.3 “a tubular housing” – ‘tubular’ has its normal meaning (shaped as a tube) – consistent with fitting onto a pipe. Not limited to circular cross-section, though since pipes could be other shapes. But elongate, hollow and open ended is implied.

‘housing’ implies is containing the rest of the device – this consistent with the description and embodiments. Therefore, housing = outer casing in which other features contained

1.4 “a trough” - trough is further defined in the rest of the claim – (must comprise floor and wall which is consistent with normal meaning of trough being a dip or hollow capable of holding a substance).

In context of the patent - trough must = channel having a floor and walls defined by the housing and inner retaining wall. However, function of trough well known to those in the art - to channel the water, therefore this particular construction not necessary – (idea of troughs known from prior art – see p.7 lines 5-6 for example)

Therefore, trough = any channel capable of containing water flowing in the device

(constrained by later features in claim).

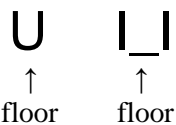
1.5 “protruding inwards from the inner wall of the housing” - an housing is a tube, is clear what is meant by inner wall.

Trough “protrudes inwards” – this means it sticks out toward the centre of the tube, from this inner surface of the tube.

1.6 “the trough comprising a floor” - the trough includes a floor. This is consistent with normal meaning of trough - must have some kind of approximately horizontal base.

Floor in embodiment is flat but it is clear that a trough with a curved floor is possible and would function equally well.

The 'floor' could just mean the lowest point of the dip forming the 'trough', i.e. equally

possible. 

However, floor must have an 'inner edge' (see later, para 1.9) which suggests might be limited to flat → page 5a.

Therefore, floor = base of trough, must have 'edges', so must be at least partly flat.

Therefore, floor = base which is partly flat such that has edges.

1.7 “... connecting to the inner wall” - the floor of the trough ‘connects to’ the inner wall of the housing.

This could = directly connected - i.e., as in the examples, the floor of the trough extends from the wall itself, such that the inner wall of the housing forms the outer wall of the trough – the floor connects the inner trough walls (a, 5b) to the housing itself (see p.7 line 36 and fig 1) .

Therefore ‘connecting to’ could mean directly attached to.

A broader interpretation is that ‘connecting’ is more general and does not require direct connection e.g. they could be ‘connected’ via intermediate connections.

‘connection’ could also refer to either a physical connection, or a functional connection, i.e. there is an interaction between the floor and the inner wall.

The purpose of the floor being connected to the inner housing wall is so that water flowing down the inner wall is intercepted and collected in the trough (see p.7 lines 38-39).

It is not necessary for the floor to attach directly to the housing for this to be achieved- there just needs to be a flow path from the wall to the trough floor.

Therefore I interpret ‘connecting to’ the inner wall as meaning in fluid communication with the inner wall such that water can flow into the trough from the wall.

1.8 “and a retaining wall” - the ‘retaining wall’ is also part of the trough - ‘retaining’ is clear in context- it must cause retention of water in the trough.

Therefore retaining wall = any part that causes water to be retained.

1.9 “standing up from the inner edge of the floor” - implies floor must have an ‘edge’- see 1.6 inner edge is clear in context- is edge towards inside of tube.

‘Standing up from’ is clear – if did not have vertical dimension would not perform ‘retaining’ function.

1.10 “A drain connection” - is clear- an outlet for draining of the trough.

1.11 “extends outwards through the housing wall” - is clear.

- 1.12 “*in the vicinity of the floor of the trough*” – ‘in the vicinity of’ so need not be at the floor, although in the example, “sloping floor 6b is connected directly to base of drain connection 7”.

However clearly ‘in the vicinity of’ is intended to more general

Sensible interpretation is – ‘near enough to serve purpose of draining trough’ therefore, as long as is below level of retaining wall will work

Therefore, in vicinity of floor = near floor, so that content of trough drains through.

- 1.13 “...*Floor of trough slops in the housing*” - ‘slopes’: in embodiment slopes at ~30° to horizontal

Do not think is limited to ~30° however, since claim 2 contains this feature and depends on claim 1, so claim 1 must be broader.

Clear that horizontal trough does not slope, and this would not serve purpose of directing water towards the drain so that drains away easily but doesn’t suffer from silt deposition (see p.7 lines 18-19). Vertical trough also not possible since if floor was vertical could not direct toward drain extending laterally through housing wall.

therefore, slopes could = neither horizontal nor vertical but at angle in between.

This might still be too broad – there is clearly an optimum angle to achieve efficient drainage and collection simultaneously. However, as mentioned above, it is claim 2 that seem to limit to optimum degree of slope.

therefore ‘slopes’ = is at an angle between vertical and horizontal.

slopes ‘in the housing’, therefore the angle is relative to the housing (the housing wall, being presumed vertical –since ‘downpipe’ expected – vertical).

- 1.14 “... *toward the drain connection*” - is clear – direction of the slope is towards outlet.

- 1.15 “*which is arranged to extend from the vicinity of the deepest point at the sloping floor*” - refers to the drain connection

already established is in ‘vicinity of floor’ of trough (see 1.12).

the ‘deepest point’ of the sloping floor could = deepest point on floor relative to walls - but if floor is flat this does not make sense since the floor is all of the same depth.

P.7 lines 36-38 state that floor slopes ... and in its deepest place communicate with drain ...

i.e. it is clear that it is referring to the deepest point of the slope.

‘deep’ therefore refers to the relative vertical position and the deepest point of the slope is the point lowest down the tube.

Claim 2 Dependent on claim 1

- 2.1 “... *the floor of the trough lies at a slope of approximately 30° to the horizontal*” - clear in the sense that have established that floor of trough slopes rel. to housing.

‘approximately 30°’ - not limited to exactly 30°, therefore encompasses a range either side.

Description is silent as to acceptable range, however. Person skilled in the art of pipe fitting etc would probably realise that there would be quite a large tolerance in the angle of slope, since it looks likely that most angles between horizontal and near vertical would work, albeit not as well.

Therefore, a reasonably generous range might = 15-45°.

On the other hand, figure at 30° given to 1 significant figure, therefore perhaps reasonable to say that that degree of accuracy is expected, i.e. 25-34° acceptable.

Narrow interpretation would be only angles v. near 30° (i.e. 29.5-30.5°, 29-31°?) - but I think this field is probably not that precise so I reject this interpretation.

On balance, I prefer the intermediate view here – I think that 25° or 34° would be considered ‘approximately 30°’ but I think it is pushing it too much to say that 15° or 45° is approx 30°.

Therefore approx 30 = 25-34° to horizontal.

Claim 3 (dependent on claim 1 or 2)

3.1 “*the trough extends substantially continuously around the inner wall ...*” - this could mean: trough is continuous, however this clearly inconsistent with embodiment which shows a 2-part trough.

P.7 line 43- connected along entire length of outer edge (could just mean this).

Page 7 lines 38-39 state that the trough intercepts water flowing down the inner wall at all points around its circumference.

Therefore, final defⁿ would be that trough is ‘substantially continuously extending’ if it is capable of collecting from all points on wall circumference.

Since rest of claim requires opposed parts to be vertically offset it sounds as though is intended to cover embodiment shown therefore this defⁿ is most sensible.

Therefore, extends subst. continuous etc = intercepts water at all pts on circumference.

3.2 “... *parts diametrically opposed with respect to each other in the housing*” - clear enough in context given tubular nature of the housing. There must be at least 2 ‘parts’ since they have to be ‘opposed’.

Do not think the parts have to be separate since not described a ‘disconnected’ – c.f. claim 4.

Therefore, just means has two ‘parts’ which are on opposite sides of a diameter of the housing.

3.3 “... *the opposed part being vertically offset from each other ...*” - in context of the housing, ‘vertical’ is clear (direction of downpipe) – direction of tube axis p.7 line 45-46 ‘offset from each other in elevation...’ is consistent with this.

Therefore, vertically offset = having different elevation

Claim 4 depends on 1 or 2

4.1 “*trough is divided into two disconnected parts” - is clear – parts are not connected physically (there is a gap).*

Could limit to parts = ‘halves’

P.7 line 42 – each extends round half circumference but this only ‘preferred’ – see line 19 not essential

Therefore just means two distinct parts

4.2 “*Vertically offset*” (as for 3.3)

4.3 “*so as to define a vertical gap*” - is clear – gap = space between them (see fig 2 ref 8) - gap is vertical due to the direction of the offset.

4.4 “*which provides additional flow area....*” etc - water can flow in the gap.

“unobstructed cross- section” p.8 lines 1-3

INFRINGEMENT

The client’s ‘Serpentsava’ device will be manufactured and marketed in the UK. EP’139 is in force in the UK.


Therefore need to establish whether client’s device falls into any of the claims of ’159.

Claim 1

The device is a rainwater catcher for a rainwater downpipe

As shown in the diagrams on page 4, the downpipe itself (1) = a tubular housing for the rest of the device

The Serpentsava itself forms a trough (channel 2) which protrudes inwards from inner wall (sticks out toward centre) of the downpipe. The trough is comprised of a channel with a cross section

 such that it has a floor (see detail A) with edges as req^d by my construction and a retaining wall standing up from the inner edge of that floor (the wall labelled with ref 3 in detail A)

On my construction, the floor of the channel is ‘connecting to’ the inner wall of the housing, because water can flow from housing wall into the channel.

The device when installed also has a drain connection extending outwards through the housing wall (spigot 5 and shoulder 8 passing, through hole in pipe) and this connection is in the vicinity of the channel floor – see detail B - is near the floor such that contents can drain through.

The floor of the trough slopes towards the drain connection as clearly seen in the helical arrangement in the diagram and described on page 3 (sloping continuously downwards towards the spigot – line 37-39)

The drain connection is arranged to extend from near the deepest point of the slope (spigot is at lower end of helix).

Therefore:

Claim 1 is infringed by Serpentsava installed in downpipe.

However without the downpipe present, there is no 'housing' – the flexible channel, although arguably tubular (construction was not limited to closed channel or to circular x-section) is not a 'housing' on my construction

Therefore the client's manufacture and marketing of Serpentsava will not directly infringe claim 1 (and therefore, by dependency claims 2-4)

However, when the customers buy and install Serpentsava, they will be making a rainwater catcher that does fall within claim 1.

They will have a defence under s.60(3) of private non-commercial use, however (unless contractors install in people's homes for a fee)

But it means that Primrose Plating will be liable as contributory infringers since they will be supplying/offering means relating to an essential element for putting the invention into effect in the UK. The instruction provided shows clearly that they are aware of the intended use of the product; I do not think there can be any defence that it is a staple commercial product since it is specially adapted but even if there were, they would be likely to be inducing infringement by providing the detailed instructions to their customers.

I will now check if claims 2-3 would be infringed by use of the device.

Claim 2 dependent on claim 1, which is infringed

The floor of the trough in Serpentsava, if installed according to instructions is at about 15° to horizontal (p.3 lines 39-40).

This is outside my construction of 'approx 30°' and so claim 2 is not infringed

Note, however, that it is clearly possible to put the Serpentsava in at any angle, and could be argued that people will use 30° (25-34°) if it works better and so would infringe.

Claim 3 dependent on 1 or 2 (+1 def. infringed)

The trough in Serpentsava does extend continuously around the wall, even on narrower construction than mine, because it is in contact with the inner wall at all points on its length. My construction only requires that all points on circumference can be collected from, which is satisfied here.

The Serpentsava is a single piece, but you could arbitrarily define bits of it as 'parts' since my construction does not require distinct or disconnected parts.

Therefore, the first half of the coil could = 1 part, the second half of coil = 2nd part and these are diametrically opposed since on opposite sides of a diameter of the tube.



They are also vertically offset because the first part of the coil appears to be higher than the second in the diagram (and this implied by the 'continuous' slope).

Therefore claim 3 infringed as depends on 1 (but probably not as depends on 2, see above).

Claim 4

Is not infringed as there are no 'disconnected parts' – the trough is a single piece.

Therefore, can be seen that client may be contributory infringer under s.60 (2) PA1977 for claim 1, 2 and 3 (if found valid) but not 4.

NOVELTY

Prior art =

- GB 271 828 – this cited in spec
- US 6022142

Both full prior art as published before priority date (30.10.00)

Patent EP'159 also mentions 'similar products' to GB'828 – assume there wasn't anticipate unless GB'828 does so no need to consider separately (as have no details)

Considering each document in turn:

GB 271'828

Claim 1

GB'828 described a device for water conservation 'in or for a drainpipe' (p.11 l:38-39) so this is clearly a 'rainwater catcher for a rainwater downpipe'.

The device has a tubular housing (pipe 16) a trough (ring shaped area 20 forming reservoir 24 - is a channel for containing water) which protrudes inwards from housing inner wall, and has a floor (sealed end 22) connecting to the inner wall (directly attached – see fig 2, therefore water can flow from wall into channel formed by floor) and a retaining wall (second pipe 18 retains water in the 'reservoir' 24) which stands up from the inner edge of the floor; a drain connection (outlet 6) extends outward through the housing wall (as shown – fig 3) and this is in the vicinity of the floor - (near the floor 22, such that can drain easily as shown in fig 2).

However, the trough is horizontal or floor 22 is flat and horizontal therefore, the trough does not slope in the housing.

Therefore, claim 1 is novel over GB'828.

(this is as expected – since acknowledged as closest prior art in spec).

Since claims 2-4 depend on claim 1 they are also novel over GB'828.

For completeness, and in case relevant for I.S. later, however, I note that:

- Claim 2 involves 30° slope- not known from GB'828 since no slope
- Claim 3 requires vertically offset parts – not known from GB 828

- Claim 3 also requires vertical offset and disconnected parts

i.e. none of the extra features of claims 1 are known from GB'828.

US 6022142

This document describes 'apparatus for controlling liquid flow under gravity' – however, it is clear from page 16, column 1 lines 6-7 that rainwater collection in downpipes is envisaged.

Therefore, US'142 describes a rainwater catcher for a rainwater downpipe, comprising a tubular housing (housing 301 formed as a 'tubular element')

On my construction of trough, as any channel capable of containing water flow, the deflector plates 309a and 309b could be argued to be a trough – although they do not really 'contain' the flow, they merely direct it (but could 'contain' on surface). However, the plates do not have 'retaining walls' standing from their inner edges and so they do not fulfil the requirements of the troughs of claim 1.

Therefore, although the device in US'142 does have the requisite drain connection (outlet 306) and the plates slope in the housing ('inclined' page 16 line 45-56) toward the drain, claim 1 is novel over US'142 because no retaining walls to trough.

As claims 2-4 depend on claim 1, they are also novel over US'142 by dependency.

However, as before, will look at addn¹ features briefly;

- Claim 2 requires ~ 30° slope for trough floor, the plates slope at 25° to horizontal which is within my construction of approx 30°
- claim 3 requires that trough continuously extends round inner wall – as only x-section shown, not clear whether the plate allows collection from all points on wall circumference - suspect not as extend from wall 'portions' (p.16 line41). However, are diametrically opposed and vertically offset.
- Claim 4 requires 2 disconnected parts vertically offset - this is present in US'142 – plates 'two separate parts' (p.16 line 45) and are offset with vertical gap (see fig 1)
- Therefore, insofar as the plates can be regarded as 'troughs' (doubtful) the extra features of claims 2-4 appear to be known from US'142.

Summary:

NOVELTY – all claims appear to be novel in light of available prior art.

INVENTIVE STEP

Following the *windsurfing/pozzoli* approach, the inventive step of claim 1 will be considered. The 'person skilled in the art' in this case is a person working in the field of drainage systems - either a fitter or a manufacturer of these kinds of devices. Skilled workmen or technician – not a researcher or designer with inventive ability.

Common general knowledge in the field in question obviously includes the type of devices shown in GB'828, and acknowledged in the patent, especially given the facts that GB'828 is very

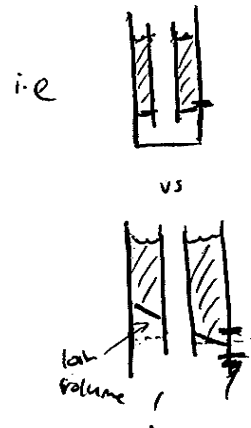
old (1927) and it is stated that many similar products are on the market from a number of different manufacturers (see page 7, lines 9-10 of the patent). Therefore, the idea of troughs inside the downpipe to collect water running down the inside edge is known.

The inventive concept of the presently claimed invention is the provision of a rainwater catcher with a sloping trough connected to the inner walls of a tubular housing to collect and contain water and channel it towards an outlet.

The difference between this and the 'state of the art' – as represented by GB'828 – is that the trough has a sloping floor which slopes toward the outlet.

The question is, therefore, would it have been obvious to the skilled person to adapt the device of GB'828 by using a sloping floor to seal the 'reservoir area'?

On one hand, it could be argued that GB'828 does not suggest that sloping floors could be used and that it may even be said to teach away from using a sloping floor, because the reservoir area is defined by the walls and floor and less water would be able to be stored in the reservoir area if the floor were made to slope toward the outlet because the volume would be reduced,



On the other hand US'142 shows a device for the same purpose which has a sloping floor (albeit not 100% within defⁿ of 'trough'), which directs the flow of the water. Since the document is in a closely related field it is v. possible that the skilled person would be aware of both documents and think to combine their ideas

Also, the idea of using an incline to direct flow of a fluid (under gravity) is well within the common general knowledge of most people, and it would be obvious to try this in this case, with the knowledge that it would work and would be likely to provide an improved collector.

On balance, I don't think the loss in volume of the reservoir is significant and so I think the use of a sloping floor is obvious over GB'828, in light of common general knowledge, and of US'142

Therefore, claim 1 lacks inventive step.

Claim 2 – depends on claim 1

Extra feature of claim 2 is angle of ~30°.

Once slope is used, any particular angle could be chosen – matter of workshop technique/routine trial and error, therefore in the absence of any special and surprising properties associated with 30° angle do not think this is enough to → inventive step.

Also, as discussed earlier, 25° angle = approx 30° and this is known from US'142.

Therefore claim 2 not inventive.

Claim 3 dependent on 1 or 2

The feature of the trough extending continuously around wall is part of common general knowledge since present in GB'828.

The feature of 'vertically offset parts' is known from US'142. However, it is not in the context of a trough having walls or in the context of a trough extending continuously around the inner wall of a pipe.

The vertically offset portions make possible the relatively unobstructed x-section of the pipe around the trough (page 7-top page 8) for drainage of surplus water.

In US'142 the plates seem to reach the centre point, therefore the horizontal x-section is obstructed so this effect is not achieved.

Therefore, would not be obvious to apply this feature to devices like GB'828.

Therefore, Claim 3 is inventive

Claim 4

Claim 4 also includes the vertical offset feature, therefore for same reasons as claim 3 it is inventive.

SUFFICIENCY

There do not seem to be any sufficiency issues except that it is not clear from spec. in claim 3 has parts can be vertically offset without being 'disconnected', but this probably within common general knowledge.

AMENDMENT

Claim 3 and 4 are novel and inventive.

Therefore obvious validating amendment would be to incorporate 'vertical offset' feature into claim 1. Is present in claim 3 in isolation from the 'gap'/disconnected parts feature, so assume this has basis in appⁿ as filed.

ADVICE TO CLIENT

I have assessed the results of your search and although your 'Serpentsava' device does not itself infringe the claims of EP'159 (which is the only patent you found which is in force in the UK), I think that you would be contributorily infringing claims 1 and 3 if you supplied the device to UK customers.

However, in my opinion, claim 1 is not valid. The patentee may be able to amend claim 1 though, to make it valid, by bringing in features from claim 3.

I can do further investigations (e.g. by checking the file wrapper to see if any matter was added during examination, which might invalidate the claims), but on the face of it, there is a freedom-to-use issue with EP'157.

This means that if you start to sell your product, the patentee could try and stop you by taking action for infringement and seeking an injunction. If they do this before you start manufacturing there is a slim possibility that they could obtain an interim injⁿ to prevent you starting marketing. Clearly, if this is a possibility you should sort it out before investing heavily in new machinery. In any case, even if they don't manage to get an interim injunction, defending an infringement action would be very expensive.

I recommend approaching the patentee and negotiating a licence. Since they are a Japanese company, and you are only interested in the UK market, and since your device is actually very different from theirs as sold, it is likely that they will be happy to agree reasonable terms. It will be a good idea to get your own application filed before you do this since a cross-licence might be favourable to both of you, and decrease the royalties payable.

On further point – Esp@cenet not v. reliable – suggest title search.

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2007 PAPER P6

SAMPLE SCRIPT B

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CONSTRUCTION

Claim 1

'Rainwater catcher' - this implies that the claimed device actually catches falling rain. This is not the case with the invention described in that it collects or diverts rainwater that has already been caught in a drainage system. See the discussion of the prior art rainwater catcher on lines 1-4.

'for a rainwater downpipe' - this is normally intended or taken to mean 'suitable for', as in the rainwater catcher is capable of being used in rainwater downpipes to divert or collect rainwater therein (and also not inconvenient). It is not particularly important in this case. I will therefore take it to mean 'for use in' collecting or diverting water running in the 'downpipes' of rainwater drainage systems ie the downpipe is the one which extends in a vertically downwardly direction to take rainwater to a storm drain. 'for use in' can mean inserted into or use in conjunction with a downpipe.

'Comprising' - takes usual meaning of 'not limited to only the following features and other elements can be included' ie the claim is 'open'.

'tubular housing' - 'housing' implies some part of superstructure of the rainwater catcher in, or on which the other elements of the device are provided or disposed.

The housing could be taken to be a part which is shaped to fit into the downpipe. The housing is clearly 'arranged to fit into and form part of the downpipe' (see lines 33-34).

Tubular means merely long and closed in cross section and is not particularly limited to being circularly cylindrical.

'trough' - a trough usually implies some collecting or retaining receptacle for liquids which is substantially 'U-shaped' in cross section. However, the shape and arrangement of elements of the trough are later defined in the clause and so trough should take its more broad and general meaning of 'some collecting or retaining element' which collects the rainwater in the downpipe.

The trough must extend radially inwardly from the inner wall of the closed cross section of the tubular housing.

'Floor' - here, the structure of the trough is partially defined. Floor must mean the surface over which or on which the collected rainwater in the trough runs or is disposed.

NB, the floor is only said to be 'connecting' to the inner wall of the housing and is not limited to being directly connected thereto. 'Indirect connection' is all that is required by the claim. Clearly this must be so as to prevent rainwater from dripping between the trough floor and the inner wall and passing to the storm drain, avoiding the catcher.

'retaining wall' - ie some wall which extends upwardly to prevent water collected by the floor of the trough from immediately running off and being lost from the trough.

Provided at the inner edge of the floor

Therefore, there must be a central 'radially inward' space radially inwardly of the wall in the housing

'drain Connection' - this does not mean a connection to the storm drain. The downpipe already performs this function. It clearly means a connection to drain the rainwater collected by the trough outwardly through the housing

'vicinity' - the outlet must be provided sufficiently near the floor in order to provide efficient drainage of rainwater so there is not too much standing rainwater always below the outlet level.

'slopes' - in view of the purpose of the invention, the sloping is to provide self cleaning action in the trough. This is achieved by the floor 'sloping such that incident collected rainwater automatically runs off the trough floor'. Slope need not be in any particular direction as long as it ends up with lowermost points near outlet.

'vicinity of deepest point' - the connection to the drain must be provided near the lowermost point of the trough floor again to maximise potential trough drainage and minimise potential standing water.

Claim 2 depends from claim 1

'approximately 30° to the horizontal' - this means that the trough floor should at all points have a slope at 30° to the horizontal when the device is vertically aligned in a downpipe.

In view of the self-cleaning purpose of the invention, approximately 30° has been found to be the optimum to achieve this purpose but the 'approximately' indicated that this should be construed broadly to cover a range of slopes, slope which effectively achieves self-cleaning. Tests would be necessary but 20°-40° seems a reasonable assumption

Claim 3 dep 1 or 2

Clearly this claim must be intended to be of difference scope to claim 4, though they are not alternatives.

'substantially continuously around' - this clearly means when viewed from above there is an unbroken floor channel around the periphery of the inner wall. There are central and vertical discontinuities in the embodiment. These must be allowed in the claim.

'parts diametrically opposed' - are the parts separate as in the embodiment? How many parts are there? Two? Or more?

Clearly claim 4 is directed to the two disconnected parts of the trough. Claim 3 must relate to something different.

The 'substantially continuously' implies that parts of the trough are provided on opposite sides of the housing. These parts must be 'vertically offset' from each other merely to provide a 'head' of water to drain the collected water around or along the trough at the inside of the housing wall.

Claim 4 dep cl 1 & 2

'two disconnected parts' - two exactly. They are not materially connected to each other directly.

'vertically offset' - they must be at different relative vertical positions as long as there is an outflow gap to the storm drain between them. They can conceivably overlap vertically.

"additional flow area" - additional to what? The first flow area for passage to the storm drain through the lower end of the housing is through the central aperture defined by the retaining wall. Clearly the gap must provide an outflow passage in addition to this and not in addition to the drain connection outlet.

NB. Upper and lower ends has no antecedent but clearly these are implicit features of the closed cross section tubular housing.

NB reference numbers are not limiting on the claim but are used to increase the intelligibility thereof.

INFRINGEMENT

We must first ascertain whether the Serpentsava falls within the scope of any of the claims.

Claim 1

Feature

Rainwater catcher –

- yes – channel 3 collects and diverts water caught in a drainage system

for...downpipe –

- yes – clearly can be inserted into a rainwater downpipe to collect rainwater.

tubular housing –

- The channel 3 is spiral shaped to fit into a downpipe but it is not a part of the downpipe structure itself, it is additional to it on the inside of the downpipe. Further, the channel 3 does not have a closed cross-section – no – not part of Serpentsava. However, when in use, the existing downpipe 1 clearly functions as the tubular housing of claim 1.

a trough –

- yes, channel 3 'catches and diverts water...in the downpipe (see lines 16-17).

protruding inwards...housing –

- No, no housing. But when in use, the channel 3 does extend radially inwardly from inner wall of pipe 1.

floor –

- yes collected rainwater runs over bottom surface of 'U' Shape channel 3.

connecting to ... inner wall –

- No, but when in use, the floor is indirectly connected to pipe wall 1 by outermost channel wall and integral rubber bead 4. Not a material connection but resilient of channel causes a strongly abutting connection.

retaining wall ... inner edge of floor -

- Yes, radially inwardly U-shape channel 3 wall stands up from innermost edge of trough floor and prevents loss of water from trough. A central space is defined by the retaining wall.

drain connection ... housing wall-

- Yes – in use the spigot 5 allows rainwater collected by trough to drain outwardly through pipe 1 wall.

Vicinity ... trough -

- Yes – Spigot 5 is, in use, at the bottom of trough floor minimising standing rainwater below that level.

floor slopes ... drain connection –

- Yes – in use, the spiral extends in the pipe upwardly so that the floor slopes and collected rainwater in the trough will run off the trough floor toward the spigot 5 (NB unless the trough is backed up). However, still falls in scope of my construction.

Extend floor -

- Yes – spigot 5 is at lowermost point when in use and standing water is minimised

Therefore, the Serpentsava does not fall within the scope of claim 1. However, when it is installed into a standard downpipe it does fall within the scope of claim 1. Therefore, Serpentsava does not, itself, fall within scope of claims 2-4. But does it when in use?

Claim 2

Slope of ... horizontal

- Unclear, this will depend on a number of factors such as the diameter of the pipe it is installed into; and how much it coils up and inside it; the natural resilient of the channel. Also, it is not clear whether the channel is 'sloped' in its natural, non-use state.
- Clearly there will be some cases where in use 20°-40° is achieved and this seems v. likely.
- Further, in accordance with my broad purposive construction, it infringes in use as it is said to be 'self-flushing' - does not silt up due to its slope.

Therefore, Serpentsava falls within scope of claim 2 when in use.

Claim 3

'trough around inner wall'

- Yes, when viewed from above spiral will extend an unbroken floor of the channel around the periphery of the inner pipe 1 wall.

Parts ... each other in the housing

- Yes, there are diametrically opposed parts of channel 3 at all points in spiral when in pipe 1 i.e.



Vertically offset

- o Yes, when in pipe 1, spiral coils upwards so parts are vertically offset to create a 'head' to drain water off.

Therefore, Serpentsava falls within scope of claim 3 when in use.

Claim 4

Two disconnected parts

- o No, channel 3 is provided as a single material part which is a spiral shape in use.

Therefore, Serpentsava falls outside claim 2 in scope.

According to my construction, Serpentsava falls within the scope of claims 1,2 and 3 when installed in a downpipe.

POSSIBLY INFRINGING PARTIES

If the client manufactured the Serpentsava according to the advertising literature, he would not directly infringe the patent EP159B.

However, by selling / supplying the Serpentsava to customers who fit the device in their downpipes and directly infringe claims 1, 2 and 3 by use of the claimed invention, PPL will be supplying an essential means for putting the invention of cl 1, 2 and 3 into effect.

Therefore, PPL would contributarily infringe cl 1, 2 and 3. He has requisite knowledge.

There is no staple commercial product defence here as Serpentsava is specifically designed. He would also be a joint tortfeasor in view of instructions to infringe which indicate a 'common design' to perform an infringing act in UK.

Private customers who directly infringe would have a private and non-commercial use defence, but this does not extend to contrib. infringers such as PPL.

VALIDITY

Prior Art

GB 271828 (doc C) is full prior art.

US'142 (doc D) is full prior art.

'conventional' raincatchers (such as) doc C are directly referenced in EP'159 patent and are considered as comprising common general knowledge (CGK).

NOVELTY

Claim 1

key = √ - present

x – feature not present

Feature	Doc C	Doc D
'rainwater catcher for...downpipe'	√ Distribution device 2 for collecting and diverting water caught in a rainwater downpipe	X Apparatus diverts caught water in a rainwater downpipe and diverts it to outlet 306

‘ a tubular housing’	√ Outer wall 14 fits into and forms part of pipe 12 and has closed x-section (fig 3)	√ 301 housing fits into part of downpipe structure in use. Closed x-section
‘trough protruding inwards...housing’	√ Ring shaped area 22 forms reservoir for collecting rainwater	√ Deflector plates 309 a, b, collect incident rainwater and divert it. Only retain rainwater when backed up. Protrudes inwardly from wall
‘floor connecting ...inner wall’	√ Seal 22 provides surface on which rainwater collects. It connects directly to housing wall 16	√ Deflector plate upper surfaces connected directly to inner wall and collected rainwater runs across it
‘retaining wall...inner edge of floor’	√ Inner pipe 18 provides vertically extending wall of inner edge of seal 22 and central space radially inwardly thereof.	X Nothing upwardly extending to retain caught water from running off and being lost from trough. Plates 309a,b, have no ‘inner edge’.
‘drain connection...in vicinity of floor of trough’	√ Outlet 6 is near seal to minimise standing water underneath	√ Outlet 306 to butt opens into bottom of plate 309a→no standing water
‘floor slopes towards drain’	X No – seal 22 is horizontally disposed when provided in pipe 12	√ Inclined surfaces of plate 309a,b such that rainwater immediately runs toward drain
‘drain connection....deepest point’	X No ‘deepest’ or lowermost point	√ Outlet 306 at lowermost point of sloped plates 309a,b

Therefore, claim 1 is novel over both docs C and D in my construction.

→ claims 2 and 4 are therefore also novel.

However, consider their features in case a different construction should be taken e.g. of ‘retaining wall’.

Claim 2

Doc D slope is said to be inclined at 25° to horizontal col 1, 1.45. This falls within my broad purposive construction as ‘self cleaning’ will inevitably and inherently result at this angle (but it should test this). Doc D provides this feature, in my construction.

Claim 3

Diametrically opposed points at outermost edge of plates 309 a, b in doc D are vertically offset from each other and the extend around the wall when viewed from above.

According to my construction, doc D discloses the features of claim 3.

Claim 4

Plates 309a,b are in two disconnected and vertically offset parts, and gap shown by arrow provides a flow area to storm drain through outlet 304.

NB, this is not in addition to a first flow area defined by any central aperture.

Therefore, claim 4 features not all disclosed by prior art.

INVENTIVE STEP

The man skilled in the art would be a gardening implement and tool designer who is concerned with garden irrigation and hosepipes, water conservation, etc.

In his common general knowledge, he would be aware of the conventional rainwater catchers as exemplified by doc C.

Claim 1

Beginning from Doc C, in order to arrive at the apparatus of claim 1, the skilled man would merely have to adapt the seal 22 to have a downward slope ending with the outlet 6 at its lowermost point. While there is nothing in the document to suggest that the skilled man might want to do this to motivate him, the clogging of the ring shaped trough 20 by collecting rainwater sediment and leaves etc would undoubtedly be an evident problem with Doc C that the skilled man would want to solve. The outlet 6 would become clogged over time.

In order to solve this problem, he would immediately think to provide a sloped seal surface diverting water straight to outlet 6 to prevent water from standing and sediment settling. This is an obvious solution to the problem as the self cleaning effect would also be evident. Further, if the skilled man looked at Doc D, which he would as it is in the same technical field as C, he would see that sloping surfaces could be used in rainwater catchers to divert rainwater to outlets.

On the other hand, the device of Doc C is designed to provide a reservoir in the tube which can be tapped as desired by multiple outlets. Providing a sloped surface and stopping standing water from collecting (except when the outlet backs up) would go against the purpose of the conventional rainwater catcher of doc C.

However, other reservoirs such as butts are clearly common in the art and have greater capacity. Therefore, the skilled man would provide a butt in place of this internal reservoir.

Therefore, claim 1 lacks an I.S. according to my construction.

Starting from Doc D to arrive at claim 1 is more complicated because there is no teaching of how the deflector plates can be adapted to have retaining walls at their inner edges.

Claim 2

If it is obvious to combine Doc D and C, the skilled man would provide a sloped floor falling within claim 2's scope @ 25°.

→ claim 2 lacks an I.S.

Claim 3

Again, in my novelty assessment, as doc D provides the features of claim 3, if it is obvious to combine D & C, which it is, claim 3 lacks an IS

Claim 4

In order to adapt doc C catcher to arrive at claim 4, the skilled man would have to split seal 22 in parts and space them apart vertically. This is suggested by Doc D.

However, to adapt doc C device in this way is a little more complicated, but claim 4 is obtainable by combining C with doc D.

Doc D also teaches the concept of providing a gap to allow rainwater to flow to storm drain through in this way. However, doc C already has a central outlet to the storm drain in the central pipe 26.

There is no reason why the skilled man would adapt C to provide a second flow area to allow rainwater to the storm drain in addition to the first.

Therefore, claim 4 is inventive

Other Invalidity Issues

No problems when insufficiency in patent. Upper and lower ends in claim 4 have no antecedent → can overcome by amendment.

AMENDMENT

The patentee, Nippon, could improve its position by including claim 4 in claim 1. This is not infringed by client!

One possibility would be to include cl2 in claim 1 but limit it to 30° more exactly. This may arguably be contributarily infringed by PPL if their Serpentsava generally aligns to a nearly 30° slope or there is no way they can prevent it from having a slope of this angle

ADVICE

On the basis of my construction, which is one a court might reasonably take, I take found:

- You don't directly infringe any claims of EP (UK) by making/ selling device.

You do contributarily infringe claims 1,2 and 3 of Nippon's EP (UK) patent by supplying and offering to supply your customers with Serpentsava, who would then directly infringe by making/using inv. of claims 1,2 & 3.

They (customers) have private and non-comm. Defence.

You do not!

You are also likely to be found a joint tortf.

However, while claims 1-4 are novel, claims 1-3 lack an IS

There are no valid claims that you would infringe.

Of course other constructions are possible and a different finding may be arrived at where you do infringe a valid claim.

Also, they may amend Cl.1 to include Cl.2 which you may infringe.

To give you certainty before marketing, I suggest I write to Nippon seeking an acknowledgement of non-infringement of their EP (UK) and an undertaking from them not to sue you. It is in your interests to keep EP (UK) valid in force to deter other competition.

If they refuse, we can seek a declaration of non-infringement from the courts.

Nippon may seek action by suing you for damages or account of profits and an injunction to stop you from selling. This should be avoided.

We could counterclaim for revocation but this gives us no certainty.

I suggest that we file a UK (and eventually maybe EP(PCT) app for your insertable Serpentsava which has clear advantages over Nippon's device. This should hopefully be patentable.

Then we are in a strong position to seek a cross-licence from Nippon which would mean your selling the device is non actionable.

Therefore, file patent app → seek acknowledgement of non-inf

- If not, offer cross licence
- If not, seek dec of non inf or revocation.

* * * * *

2007 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

Claim 1

“Rainwater catcher” = a device that catches water so that it can be drained from a pipe elsewhere (1 2-4). The words do not limit claim to something that catches and retains water, because the device itself does not ‘hold’ water, but merely re-directs it.


Therefore, device for catching and re-directing water

“for” = suitable for use with a rainwater drainpipe.

“tubular housing” = clear. Housing for containing elements the shape of which is tubular / pipe shaped

“Comprising” = includes all following features and extra features.

“trough” = would have the normal meaning – reservoir for holding water, however, ‘trough’ here is broader than simply ‘retaining’ water, as the trough in B does not actually retain water, but catches it, before it runs downwards due to the sloping floor.

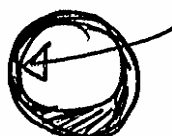
Therefore trough = holds water due to its inner wall, floor and retaining wall, i.e. ‘trough’ shaped  but not limited to retaining water and still covers trough shaped structures which act as a conduit.

“trough protruding inwards” = the trough extends from inner wall of housing towards centre of the housing.



“floor” = clear - ‘bottom’ surface over which the water would run/sit.

“connecting to the inner wall” = could be construed narrowly to mean that the floor is directly connected (with nothing in between) or not integral to (i.e. 2 parts connect) however, the patent is silent to either of these features and the device would still work either way so I take it to mean that the floor is connected to, i.e. in communication with the inner wall, either directly/ indirectly.

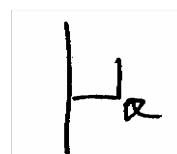


“inner” = internal surface of the housing.

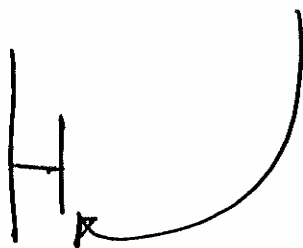
“retaining wall” = a wall that acts to retain the water within the ‘trough’.



“standing ... floor” = could be construed narrowly to mean that the retaining wall begins at the inner edge (i.e. the edge closest to the centre of the housing) due to the words “standing up from”.



However, I construe this term broadly to cover situations where the retaining wall begins earlier e.g.



because the purpose of the retaining wall is to retain water and so whether or not the retaining wall ‘overhangs’ at the bottom is irrelevant, only the section extending upwards above the floor allows it to retain water and so this is all that is required.

“Drain connection” –

“extending outward...wall” = could mean that claim limited to connection beginning internal to the inner wall of the housing, extends through the wall and out the other side, but patent’s drain connection does not do this (see fig 2) and so I construe claim broader to cover any connection as long as it allows water to pass from inside to outside and as long as connection extends i.e. protrudes external to housing.

“in the vicinity...trough” – although the figures of B show the drain connection being in direct contact with the floor (6a) of the trough, the claim language is broader than this and covers situations where the floor is not directly connected to the base of the drain connection. It is clear that the broader interpretation is intended due to the fact that the description describes (1 48-49) the floor being directly converted to the drain connection, yet the claims only state ‘vicinity’.

Therefore, anywhere in the region of trough floor = covered.

“characterised in that” = following features are intended to indicate the novel and inventive features of the claim.

“slopes ...towards connections” – the angle is such that the slope points towards the drain connection.

“Arranged to extend from .. .vicinitydeepest” – positioned such that the connection begins to protrude from the housing in a region which is close to /near the lowest point vertically of the floor. This is so that the water will flow down the slope and to the drain connection (1.48-50) and not limited to at the exact lowest point but near to (see discussion re: “vicinity” earlier).

Claim 2

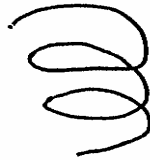
Approximately 30° to the horizontal i.e. as shown in fig 2.

Not limited to exactly 30° (due to ‘approximately’) but must be thereabouts e.g. 29°.

“According to claim 1” = includes all features of claim 1.

Claim 3

‘extends substantially continuously’ - Patent B’s trough does not extend continuously i.e. without any breaks in the trough, because the trough comprises 2 parts 4a and 4b, which are not actually connected to each other. Therefore this term must cover not only troughs that have no breaks in



their structure e.g.

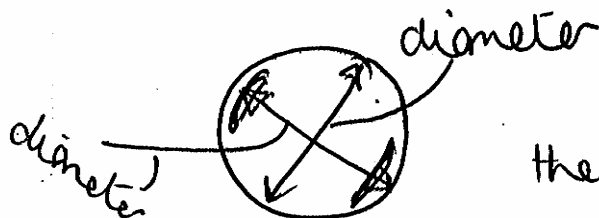
and also troughs that do have breaks.

B states (1 38-39) that “the trough intercepts water flowing down the housing inner wall at all points around its circumference” and so, as long as the trough does this, it is irrelevant whether the trough has gaps in it, or between the sections (as in 4a, 4b) or if it is one continuous channel.

“parts” = this could be construed narrowly to mean ‘separate parts’, which are not connected to each other.

However, I take this term to mean sections, irrelevant of whether they are connected to each other, because the claim 4 specifically recites “disconnected parts” indicating that the term in claim 3 is not limited to the parts being disconnected

Therefore covers more than one section of the trough irrespective of whether the sections are connected/disconnected.

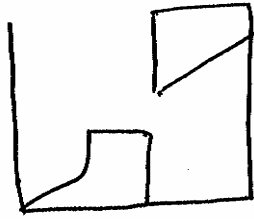


“diametrically ... housing” =

the parts are

positioned opposite to each other as shown in the aerial view, above.

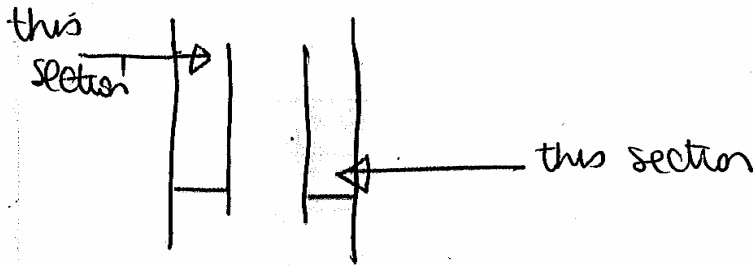
“vertically offset from each other” - the parts are not level with each other. Although the patent B describes the parts being vertically offset from each other “in elevation in the direction of the



centre axis of the housing” (l 45-46)
heights to each other.

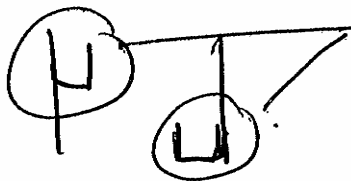
i.e. they are at different vertical

NB. This could be interpreted very broadly such that



these sections could be argued as being vertically offset from each other, however, I believe that this interpretation would be too broad and in effect would render the term meaningless. Therefore, I construe ‘parts vertically offset’ to mean parts of the trough comprising the walls and floor

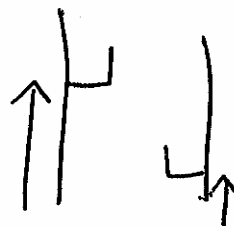
e.g.



2 parts (irrespective of whether connected/ disconnected)

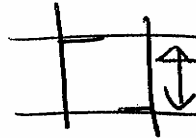
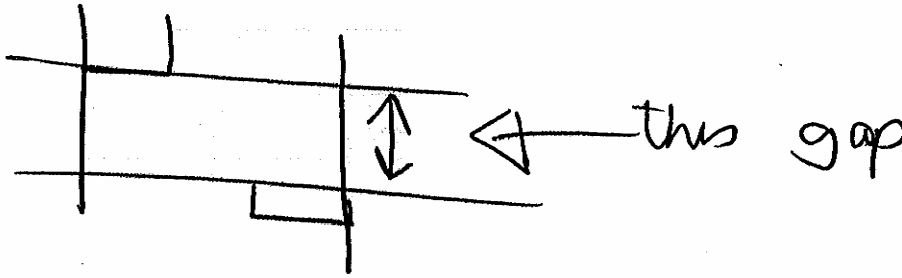
Claim 4

“divided into two disconnected parts” = the trough comprises at least two parts that are not physically connected to each other (l 41-43)



“vertically offset” = at different vertical heights

“so ... vertical gap” - the vertical gap i.e. a gap in the vertical direction is created/caused by (;’so as to define’) the parts being offset.



“Which provides...” - the vertical gap itself provides an additional flow area additional to the flow area in/ through the trough, i.e. There are 2 channels for water to flow


1. Through the trough
2. Through the gap between the disconnected parts.

INFRINGEMENT OF CLAIM 1 BY A (when fitted into an existing pipework- as intended)

A is a rainwater catcher (rainwater saving device to divert rainwater (1.5-7) (and catches water, 1.16) suitable for use in a rainwater downpipe (housed within existing drain pipework 1.11), comprising

a tubular housing (the existing pipework) NB. A does not infringe before being fitted as it is not supplied with a pipe but intended to be fitted into an existing one, a trough (one piece helical channel, 3, would act as a reservoir for holding water and also allows the water to flow downwards (which is covered by my construction), the trough protrudes inwards from the inner wall of the housing, once the integral rubber bead 4 has effectively sealed the channel to the downpipe inner wall (1.20) and the channel, 3, has a floor, i.e. the bottom part of the channel, which the water runs down and the floor is connected to the inner wall (albeit indirectly via the upright side of the channel and the seal , see left hand wall shown in details A), and has a retaining wall (the inner wall, seen on right hand side detail A) which stands upright from the inner edge of the floor (to form the trough shape).

A also has a drain connection i.e. the spigot (5) which has an elbow (7), which extend outward through the housing wall (see main figure of A) from the inside of the drain to the outside, in the vicinity of the floor of the trough (i.e. in the region near the floor of the channel (see detail B which shows the spigot being near to the channel, 3, floor).

The floor of the channel (ie the part of the trough that the water runs down  slopes in the housing (see main figure of A) towards the spigot, 5, and the spigot,5, is also arranged to extend from the vicinity i.e. the general area of the deepest point, (i.e. the lowest point vertically (see main figure of the channel).

Therefore claim 1 is infringed by client’s device when installed into a drainpipe.

Claim 2

A is not intended to infringe claim 2 because the floor of the channel of A is designed to lie at about 15 degrees to the horizontal (which is far removed from 30°).

Claim 3

(when dependant on claim 2, client doesn't infringe claim 3)

A's trough (i.e. channel) extends 'substantially continuously' i.e. it intercepts water at all points around the circumference of the inner wall of the pipe (because it travels around the circumference) and comprises parts i.e. a first section such as the higher section/portion or channel or the upper part of the pipe, which is positioned diametrically opposite to (ie on the facing wall) the lower section of the channel (see main figure). It is irrelevant that the 'parts' are connected to each other (ie long channel) – see construction section. The sections are also at different vertical heights to each other (see figure).

Therefore claim 3 infringed when dependant on claim 1

Claim 4

A's channel is not divided into 2 disconnected parts, the channel, 3, is one long continuous channel (one piece helical channel, 1.19). Although the sections of the channel albeit continuous are vertically offset (as for claim 3) to define a vertical gap which provides an additional flow...housing (does not obstruct pipe, 1.18 and figs).

Therefore, claim 4 not infringed.

NOVELTY OF CLAIM 1

Doc C is full prior art against B (accepted) published Dec 1, 1927. Priority date of B = 30.10.2000.

C describes a rainwater catcher (its used for pipes connected to guttering to collect and distribute water), suitable for use with a rainwater drainpipe (used with guttering) comprises a tubular housing (the outer wall of pipe (16) may be construed as the tubular housing because (1 43-44 p1) states that the device is fitted as an integral section of pipework and so the outer wall is considered part of the device and therefore a tubular housing.

Doc describes a 'trough shaped' structure (i.e. that created by outer wall, 16, end, 22 and the second pipe, 18, which holds water (i.e. effectively a reservoir area, 24, 21).

The reservoir 24, protrudes inwards ie towards the centre of the tubular housing inwards from the housing wall, 16, and the end, 22, forms a floor which connects to the outer wall pipe 16, and the wall of the second pipe, 18, which stands up from the inner edge of the floor (the inner edge being the edge closest to the centre of the housing (see fig 2), to retain the water in the reservoir, 24.

C describes a drain connection, e.g. outlet, 6, which extends from internal to the housing to external, see fig 2 and lies in the general region of the floor, 22, of the reservoir.

The floor, 22, of the reservoir of doc c does not, however, slope, and nor does it slope towards the drain connection. Moreover, doc C does not extend from the area near the lowest point vertically of the reservoir floor.

Therefore, novel over doc C.

NOVELTY OVER DOC D (full prior art against B because published 8 Feb. 2000)

Claim 1

D describes device suitable for catching and re-directing water from drainpipes to storage butts, as in the patent (column 1, 1.5-8).

D describes a tubular housing, 301, and (1.22-23) but does not describe a trough-shaped structure, as defined in my construction ie U-shaped. D instead describes a deflector plate 309a, 309b, which does protrude inwardly to the centre of the housing and from the inner wall of the housing, 301, and the plate itself could be construed as being a floor, as the water would run over this surface and the plate is connecting to the inner (internal) wall of the housing, but D does not describe a 'retaining' wall that can retain water and which stands up from the innermost edge of the plate.

D describes a drain connection, ie outlet, 308, however, although this does not extend outward from inside the internal diameter, my construction only requires the connection to protrude from external surface of housing, which it does. The outlet, 308, also extends outwardly in the region/area of the plate, 309a, (i.e. the floor) and furthermore the floor, 309a and 309b slope in the housing, 301, towards the outlet, 308, (see figure 1) and the outlet, 308 is arranged to extend (ie outwardly from housing see fig 1) from the region near to the lowest point vertically of the floor/plate 309a. See fig 1 where outlet 308 is at the lower point vertically (309a) (relative to 309b)

Therefore claim 1 novel over doc D

NB all dependent claims novel over prior art due to dependency from claim 1!!

INVENTIVE STEP CLAIM 1

C is closest prior art because directed to same subject matter and has most of the same features as claim 1. Also, patent itself discussed doc C as being the closest prior art (see 1.1-10)

Starting from doc C, C has all of the features of claim 1 except for the features wherein the trough slopes towards the drain connection and the drain connections being arranged to extend ... sloping floor.

The problem that this feature solves is how to provide a good self-cleaning action against dirt (1.18-20), however, the skilled man, when considering how to solve this problem, would look to doc D, which is also related to rainwater catchers for drainpipes and therefore in the same field, and would see that this problem is solved by providing such sloping surfaces for water to run over as doc D describes these exact features and consider combining them with doc C.

Moreover, it would even be obvious to the skilled man, when considering how to prevent build-up of silt/dirt in the trough of doc C to use common general knowledge and even common sense, that to use gravity and provide a sloping surface so that silt/dirt is moved downward and out of the connection at the bottom with the water flow would solve this problem.

Therefore, claim 1 is not inventive over either doc C in combination with D or with common general knowledge alone!

INVENTIVE STEP CLAIM 1 OVER DOC D

The difference between claim 1 and doc D is that D does not describe a 'trough' ie that has an inner wall, floor and a retaining wall.

It would not be obvious to add a retaining wall to the plate of doc D to make a trough, however, because water would be trapped (see arguments for claim 4) .

Therefore claim 4 may not be obvious over doc D but is still obvious over doc C.

Therefore, invalid.

NOVELTY CLAIM 2

Doc C's floor does not slope at any angle. Therefore novel.

Doc D describes that the plates are inclined at about 25° degrees to the horizontal. Therefore outside range.

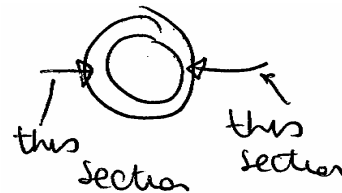
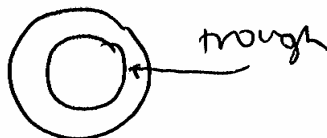
INVENTIVE STEP CLAIM 2

It does not seem that the angle of 30° has an inventive step over doc D because it is not sufficiently far removed from 25° and also does not seem to have any particular advantages. Patent B does not describe any advantages or discussion regarding this particular angle and it seems to be arbitrary.

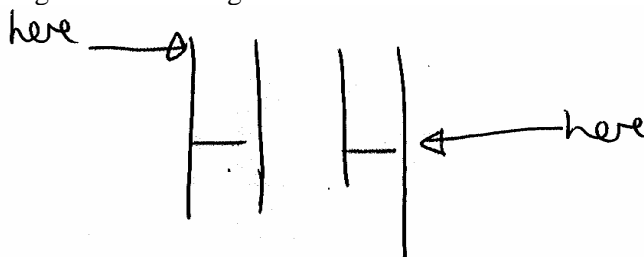
Therefore, claim 2 not inventive.

NOVELTY CLAIM 3

Doc C describes a trough (ie the reservoir 24, which intercepts water flowing down the housing inner wall, 16, at all points around its circumference, because the trough is ring shaped 20 (1.19-22).



C has sections which are opposite each other diametrically eg and although it could be argued that a 'section' of the reservoir higher up to a section lower down



e.g. construction does not cover this.

may be vertically offset, my

Therefore claim 3 novel over doc C

Doc D does not describe a trough (see above) but does describe plates 309a, 309b, which intercept water flowing down the housing inner wall at all points around the circumference (the plates extend across housing and block the axial pathway between the top and bottom of the housing (140-44 column 1) and D comprises parts, eg plates 309a and 309b which are diametrically opposite (between opposed wall portions (column 1, 1.40-43) in the housing and which are at different heights vertically to each other (see figure 1). Therefore features of claim 3 are not known from D because D doesn't describe 'trough'.

INVENTIVE STEP CLAIM 3

The difference between claim 3 and the closest prior art (doc C) is that the trough does not have opposed parts that are vertically offset from each other.

However, as discussed in relation to claim 1, it would be obvious to the skilled man, using common general knowledge and commonsense, when considering how to self-clean a device such as this, to consider using gravity to direct the water (and dirt) out of the device and so to make parts of the reservoir of doc C higher vertically than the other parts.

The annular reservoir of doc C could also easily be modified too so that one side of the ring reservoir 24, was at a greater vertical height than the other, such that water/dirt, would flow downward and out of the drain under gravity.

Moreover, doc D also describes this feature of having a surface over which water runs, the one surface being higher vertically than the other and the skilled man would look to D because it is in the same technical field.

Therefore claim 3 is not inventive over C and CGK +/-or D.

NOVELTY CLAIM 4

C does not describe two separate disconnected parts that are not physically connected to each other. The reservoir of doc C is continuous.

C also doesn't have any parts vertically offset from each other to define a vertical gap. Although the inner pipe 18 provides an additional flow area (121-22 of p12 of C). This is not due to/caused by parts being vertically offset.

Therefore, novel over C.

Doc D does not describe a trough but describes plates 309a and 309b which are vertically offset (see fig 1- have different vertical heights) so as to define a vertical gap see the gap in fig 1 between the plates where the backflow of water travels (indicated by arrows) and this gap provides an additional flow area for passage of rainwater ... housing (back pressure causes the water to flow over the upper edge ... col 2, 1.11-15).

Therefore, although trough not described additional features known.

INVENTIVE STEP CLAIM 4

The difference between doc C and claim 1 is that doc C does not have 2 disconnected parts but has one continuous reservoir.

It would not be obvious to the skilled man, when starting from doc C to divide the reservoir of doc C into 2 parts which were not physically connected because this would mean that the water from 1 part of the reservoir could not reach the other part of the reservoir and leave through the drain connection. It would in effect, be trapped. There is no way by which the water could leave the second section of the reservoir, unless the retaining wall (i.e. the internal pipe, 18 was removed) however if this was done, then the device would no longer perform its function because it would not act as a reservoir which doc C is specifically aimed towards.

Therefore, claim 4 inventive over doc C and D.

Starting from doc D:

The difference between claim 4 and doc D is that doc D does not have a 'trough', i.e. a retaining wall, a floor, an outer wall.

However, it would not be obvious to the skilled man, to add a retaining wall to the plate of doc D to make a trough because if so, then the water would not be able to flow down the plates from 1



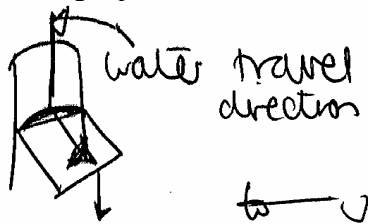
plate to the other and the water would instead be trapped.

Doc D would

therefore no longer perform its intended function for controlling liquid flow under gravity because the water would get trapped by the retainer wall/trough.

There is also no teaching with any prior art document as to how to provide a retaining wall onto the plate of doc D so that the water is not trapped but still acts as a trough as in the invention of patent B. i.e. has a trough-shaped cross-section.

In the invention of patent B, the trough is created by adding a semi-circular shaped wall into a type of plate as similar to the one known in doc D but there is no teaching within D or C towards this and a lot of modification would have to be performed and some inventive skill used, to go from a straight plate with no retaining wall as in doc D.



to the trough of claim 4



Therefore, claim 4 inventive.

ADVICE

Claim 1 is infringed when client's customers install the device in a drainpipe because they are making the device (and using it) but if they are private users, e.g. normal homeowners, they are exempt under s.60(5).

However, my client would still be a contributory infringer for supplying means relating to an essential element (i.e. the serpent) to these people, for putting the invention into effect in the UK and he would know that it is intended to put into effect in UK and also that it's infringement

The defence of supplying commercial staple product is not possible because my client is inducing the infringement.

Claim 2 may be infringed by the users if they install the device incorrectly because although A gives instructions to lie at angle of 15° (not 30°) in practice how would the user be able to judge/determine whether the correct angle is used? But, the user would be exempt under s.60(5) if for personal, home use and client may have defence as supplying staple commercial product because they are not inducing infringement, but teaching to use a different angle.

However, since no instruction is given as to how the angle can be measured, it is not clear whether this claim may still be a problem to my client.

Perhaps client would give advice on instructions on how to ensure angle = 15° to ensure that infringement is not accidentally occurring (in case it is found that claim 2 is actually valid – contrary to my opinion).

Claim 3 is infringed (by my client - contributory as before and the home owners) when dependent on claim 1 and possibly when dependent on claim 2 (as discussed).

Claim 4 is not infringed by client's device because client's device does not have a trough with 2 disconnected parts but one, one-piece channel.

NB if my client sells his product to anybody who uses it for non-private, commercial use, then they would also be direct infringer of claims 1 and 3 and maybe 3, when they installed it, but no exemption 60(5).

Claim 1 is novel over doc C and D but not inventive over a combination of the 2 and C with CGK alone.

All dependent claims novel over prior art due to dependency from claim 1.

Features of claim 2 novel over C and D and not inventive over D.

All the additional features of claim 3 are not known from C and although D describes the new addit. features (except for the trough) they are not inventive.

All the features of claim 4 are not known from C or D and they are inventive.

Therefore, client would be contributory infringer of claims 1 to 3 but does not infringe claim 4.

Claims 1 to 3 are, however, invalid but claim 4 appears to be valid. Therefore suggest to request opinion from UKIPO (s.74A) as to validity/infringement of patent PF17/77 plus £200.

This would be a non-binding opinion and would give client peace of mind.

In doing so, the patent proprietor would be informed of the opinion and on finding that claims 1 to 3 are invalid, may request amendment of the claims so that the features of claim 4 are included into claim 1.

This would mean that the claim is valid but my client does not infringe this claim and so could continue to manufacture and sell his product.

If the proprietor chose not to amend his patent, then if he later brought infringement proceedings against my client, then we could file counter-claim for revocation of his patent under s.72 for lack of novelty and/or inventive step, and if so, then it would be likely that the patentee may not be

able to amend the patent to validate it (i.e. to include claim 4 into claim 1) because such amendments are discretionary and since the patentee knew the claims 1 to 3 were invalid but did nothing about it, not only would the proceedings have not been brought in good faith, but the Comptroller may not allow such amendments.

This route seems much cheaper/easier than beginning entitlement proceedings which are much more costly than obtaining an opinion under s.74A.

NB Opposition period of EP159 has already passed and so any revocation would be done only in UK - ok though because my client only interested in UK.

There is no need to worry about infringement of docs C+D because no longer in force (too old) and doc D is a US patent, however, check whether doc D has any UK equivalents that may cause problem for my client.

Also, do clearance search for my client's product, to ensure no other valid patents in UK are infringed.

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