



PATENTS ACT 1977

BETWEEN

Andrew Zacharias

Claimant

and

Dazcom Limited

Defendant

PROCEEDINGS

Reference under section 8(1)(a), section 13(3), and then section 37(1)
in respect of patent GB2557647

HEARING OFFICER

Phil Thorpe

Mr Jamie Muir Wood for the Claimant

Mr Jerry Bridge-Butler and Mr Gareth Ashton for the Defendant

Hearing date: 01 October 2019

DECISION

Introduction

1. In or around 2014 Mr Dominic Fowls shared an idea that he had for an invention with Mr Andrew Zacharias. The invention relates to a tool for applying soldering flux to the ends of copper pipes. Mr Fowls and Mr Zacharias approached Baron Warren Redfern (BWR), intellectual property attorneys, to assist them in obtaining patent protection for their invention and trademark protection for the name of their tool, the “Fluxuator”. On the recommendation of BWR, Mr Fowls and Mr Zacharias also engaged the services of Bang Creations, a product design and development company, to assist in the development of a viable and saleable product.
2. To commercialise the product, a company, Dazcom Limited (Dazcom) was incorporated on 15th September 2015. The initial shareholders in Dazcom were Mr Zacharias, Mr Fowls and Mr Des Evans.
3. The patent application in issue, GB1621241.7 (the application) was filed on 14th December 2016 and granted as GB2557647 B (the patent) on 30th October 2019. The applicant was named as Dazcom and the inventors identified as Mr Stefan Knox and Mr Theodore Davies, both of Bang Creations.

4. At some point the relationship between Mr Zacharias and Mr Fowls and Mr Evans broke down. This breakdown has led to this reference under section 8 which was filed by Mr Zacharias on 5th February 2019.
5. In the reference Mr Zacharias claims that Mr Knox and Mr Davies should not be named as inventors on the application. Instead he and Mr Fowls should be named as joint inventors and co-owners of the Fluxuator. Mr Zacharias claims that Bang Creations was employed to bring his invention to market and that any improvements made by Mr Knox and Mr Davies to the Fluxuator were merely to make it more aesthetically pleasing.
6. These claims were denied by Dazcom in a counterstatement filed on 8th April 2019. In particular Dazcom refutes the claim that Mr Zacharias had any involvement in devising the invention and instead maintains that Mr Knox and Mr Davies are correctly named as inventors and were thus entitled to assign their rights to the invention to Dazcom.
7. Following the normal evidence rounds, the matter came before me at a two-day hearing on 1st and 2nd October 2019 where Mr Zacharias was represented by Mr Muir Wood of Counsel, and Dazcom by Mr Bridge-Butler of BWR.
8. I regret the delay in issuing this decision.

Witnesses and their cross examination

9. Of the witnesses who provide witness statements, the following were subject to cross examination: Mr Zacharias, Mr Fowls, Mr Knox and Mr Bridge-Butler. I discuss their evidence in more detail later however I need to say a little first about the cross examination of these witnesses and how credible they were. This assessment was made shortly after the hearing with their performance during cross-examination fresh in my mind.

Mr Andrew Zacharias

10. I will consider them in the order in which they gave evidence starting with Mr Zacharias. At times Mr Zacharias sought to answer Mr Bridge-Butler's questions with questions of his own. This slightly confrontational approach was not helpful and required me to intervene to remind him of what was expected.
11. Mr Bridge-Butler sought to explore Mr Zacharias' technical knowledge during his cross examination. He questioned Mr Zacharias at length on the various drawings in the patent application.
12. Mr Zacharias' responses when asked what was shown in these drawings was often "I do not really know. I am not a designer" or "I would not know because I did not do that" or to suggest that the question should be directed at Bang Creations and BWR "because that was why I paid them". Mr Muir Wood suggested that Mr Zacharias' responses merely reflected his difficulty in understanding technical drawings. However, these were drawings that

were included in the patent and by his own admission, Mr Zacharias had been involved in reviewing the patent application.

13. Whilst I accept Mr Zacharias may have been generally unfamiliar with the sort of schematic and cross-sectional drawings typically used in patent applications which Mr Bridge-Butler was referring him to, I nevertheless found it surprising that he was not able to identify any of the features mentioned. This did not accord with his witness statement where he states that he worked closely with Bang Creations throughout the prototyping stage and discussed features shown in several of the CAD drawings produced by Bang Creations. I fail to see how Mr Zacharias could have performed the role he was describing effectively if he did not know what was shown in the CAD drawings that he was being sent throughout the development process.
14. Mr Bridge-Butler was also able to highlight several other inconsistencies in Mr Zacharias' evidence, but given that they related to events that occurred more than 4 years ago it is understandable, and not enough on their own to question the overall reliability of his evidence.
15. During his closing statement Mr Bridge-Butler questioned Mr Zacharias' claim that he lacks literacy skills by drawing attention to his highly literate witness statement. Mr Muir Wood clarified that Mr Zacharias had had help drafting his witness statement. Confirming that it is not unusual for witness statements to be prepared by advisors, the witness will then read or have read to them the statements and if they are content will sign them. I agree that this is common practice hence I accept that Mr Zacharias does have some literacy limitations. However, this does not in my opinion explain the difficulty he had interpreting the drawings presented to him and this brings into question I believe many of the important and relevant claims he makes in his written evidence. And because of that I believe I need to treat his evidence with great caution.

Mr Stefan Knox

16. The next witness to be cross-examined was Mr Stefan Knox of Bang Creations. I found Mr Knox to be an honest witness who openly and genuinely sought to answer the questions asked of him. He willingly admitted when he did not know or could not recollect something. He was clearly uncomfortable that the matter had ended up in legal proceedings given that his working relationship with Mr Zacharias had in his view been good and constructive. Overall, I found Mr Knox to be a credible and reliable witness.

Mr Dominic Fowls

17. Mr Fowls was cross-examined next. He was less confrontational than Mr Zacharias, though his answers were often brief. Again, there were small inconsistencies in his evidence, relating to dates, the split of shares between the shareholders and details of the initial investment. His recollection of events at the hearing was also not as strong as suggested by

his witness statement, especially on what happened at the initial meeting with Mr Robinson of BWR when drawings were exchanged. On the latter he seemed much less sure in his oral evidence than in his written evidence that Mr Robinson had made notes on one of his drawings. He did however remain firm that he did not see the drawings that Mr Zacharias claims to have produced until they were introduced as evidence in these proceedings.

18. I should also mention one other exchange between Mr Fowls and Mr Muir Wood where Mr Fowls was asked about some publicity material for the Fluxuator that his wife had drafted. In this his wife notes that after Mr Fowls had shared his original idea with him, Mr Zacharias “spent the next few months scouring the internet, speaking to various plumbers and conducting market research to educate himself on different fluxes and the plumbing industry”. During his cross-examination Mr Fowls accepted that Mr Zacharias had undertaken a lot of research. In his re-examination, Mr Bridge-Butler returned to this press release asking Mr Fowls to confirm whether what had been written was an accurate and detailed reflection of exactly what happened. The line of questioning from Mr Bridge-Butler was I believe designed to allow Mr Fowls to nuance his answer by saying that the material was designed for publicity purposes rather than to be a detailed and accurate record however it was noticeable that Mr Fowls did not do this, even though it would have been beneficial to Dazcom’s case. Instead he stuck to his original response.
19. This exchange provided me with some reassurance that Mr Fowls was looking to answer questions honestly though the uncertainty in some of his recollections during cross examination when compared with his written evidence still leads me to treat his evidence with some caution.

Mr Bridge-Butler

20. The final witness to be cross-examined was Mr Bridge-Butler who found himself in a somewhat unusual position of representing the defendant whilst also appearing as a witness for them. This dual role perhaps explains the approach that Mr Bridge-Butler took at times during his cross examination which was to provide somewhat measured and concise answers to the questions he was asked. He was not as open with his thoughts and answers as Mr Knox. I should stress that this is in no way a criticism of Mr Bridge-Butler. Indeed, I found him to be a credible witness, a view that was also shared by Mr Muir Wood. I would note that Mr Bridge-Butler’s colleague Mr Ashton helpfully stepped in to handle the re-examination of Mr Bridge-Butler.

The Law

21. This reference was originally brought under section 8 of the Act though during the proceedings the patent application was granted. Hence in accordance with section 9, the reference is now treated as having been made under section 37(1) of the Act which provides that:

After a patent has been granted for an invention any person having or claiming a proprietary interest in or under the patent may refer to the comptroller the question –

- (a) who is or are the true proprietor or proprietors of the patent,*
- (b) whether the patent should have been granted to the person or persons to whom it was granted, or*
- (c) whether any right in or under the patent should be transferred or granted to any other person or persons;*

and the comptroller shall determine the question and make such order as he thinks fit to give effect to the determination.

22. Also relevant is section 7 which provides that:

(1) Any person may make an application for a patent either alone or jointly with another.

(2) A patent for an invention may be granted —

(a) primarily to the inventor or joint inventors;

(b) in preference to the foregoing, to any person or persons who, by virtue of any enactment or rule of law, or any foreign law or treaty or international convention, or by virtue of an enforceable term of any agreement entered into with the inventor before the making of the invention, was or were at the time of the making of the invention entitled to the whole of the property in it (other than equitable interests) in the United Kingdom;

(c) in any event, to the successor or successors in title of any person or persons mentioned in paragraph (a) or (b) above or any person so mentioned and the successor or successors in title of another person so mentioned; and to no other person.

(3) In this Act ‘inventor’ in relation to an invention means the actual deviser of the invention and ‘joint inventor’ shall be construed accordingly.

(4) Except so far as the contrary is established, a person who makes an application for a patent shall be taken to be the person who is entitled under subsection (2) above to be granted a patent and two or more persons who make such an application jointly shall be taken to be the persons so entitled.

23. The leading authority on entitlement is the judgement of the House of Lords in *Yeda Research and Development Co Ltd v Rhone-Poulenc Rorer International Holdings Inc*¹. Here Lord Hoffman notes that:

“18. Section 7(2), and the definition in section 7(3), are in my opinion an exhaustive code for determining who is entitled to the grant of a patent. That is made clear by the words “and to no other person.” In saying that the patent may be granted “primarily” to the inventor, section 7(2) emphasises that a patent may be granted only to the inventor or someone claiming through him. The claim through an inventor may be made under one of the rules mentioned in paragraph (b), by which someone may be entitled to patent an invention which has been made by someone else (the right of an employer under section 39 is the most obvious example) or the claim may be made under paragraph (c) as successor in title to an inventor or to someone entitled under

¹ *Yeda Research and Development Co Ltd v Rhone-Poulenc Rorer International Holdings Inc* House of Lords [2007] UKHL 43

paragraph (b).

19. In my opinion, therefore, the first step in any dispute over entitlement must be to decide who was the inventor or inventors of the claimed invention. Only when that question has been decided can one consider whether someone else may be entitled under paragraphs (b) or (c)....”

Lord Hoffman goes on to say that:

*“The inventor is defined in s.7(3) as “the actual deviser of the invention”. The word “actual” denotes a contrast with a deemed or pretended deviser of the invention; it means, as Laddie J. said in *University of Southampton's Applications* [2005] R.P.C. 11, the natural person who “came up with the inventive concept.” It is not enough that someone contributed to the claims, because they may include non-patentable integers derived from prior art: see *Henry Brothers (Magherafelt) Ltd v Ministry of Defence* [1997] R.P.C. 693, 706; [1999] R.P.C. 442. As Laddie J. said in the *University of Southampton* case, the “contribution must be to the formulation of the inventive concept”. Deciding upon inventorship will therefore involve assessing the evidence adduced by the parties as to the nature of the inventive concept and who contributed to it. In some cases this may be quite complex because the inventive concept is a relationship of discontinuity between the claimed invention and the prior art. Inventors themselves will often not know exactly where it lies.”*

24. So, the question I need to decide is who were the actual devisors of the invention in the patent? Was it the currently named inventors as claimed by the defendant or was it, as he claims Mr Zacharias together with Mr Fowls? To answer this, I first need to determine what the inventive concept is.

Identifying the inventive concept or concepts in the patent

25. As I have already noted, the patent in issue relates to a hand-held device for applying flux to the end of pipes prior to soldering. The device is intended for use by plumbers and aims to improve upon prior art devices by minimising contamination of the flux and ensuring an even coverage of the pipe using an economical dosing of flux.
26. The patent application sets out the background of the invention as follows:

BACKGROUND OF THE INVENTION

A known applicator device is described in GB 2470488, which discloses an applicator head having an annular flux composition dispensing region. Flux composition is dispensed into the bottom of the annular flux composition dispensing region, and the end of a pipe is inserted into the dispensing region to coat the end of the pipe with flux composition.

However, a large amount of flux composition may need to be dispensed into the dispensing region to fill it to a sufficient depth for a long enough portion of the length of the pipe to be coated, and a significant amount of flux composition may be left over in the bottom of the dispensing region and trap dirt after the end of the pipe has been coated and removed. The left over flux composition may subsequently leak out of the dispensing region, particularly in warm environments.

It is therefore an aim of the invention to provide an improved applicator device which is more economical with use of the composition.

27. The known applicator device referred to above is shown in the following figure with the pipe 21 being coated with flux 22 when it is inserted into the head of the device 14,

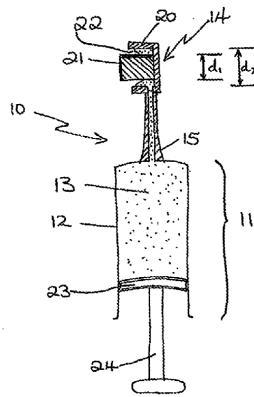


Fig. 1.

28. The invention in the patent in issue is shown, so far as is relevant to decision here, in figures 2,3 and 4 of the patent shown below.

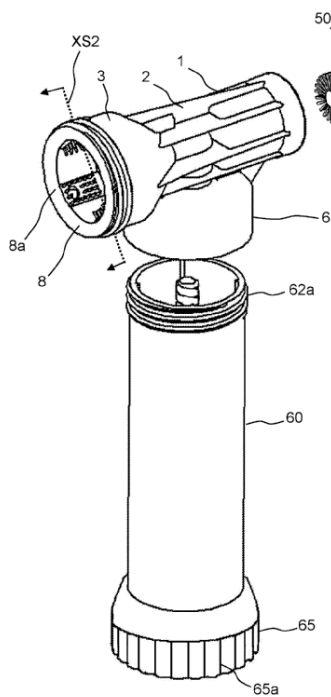


FIG. 2

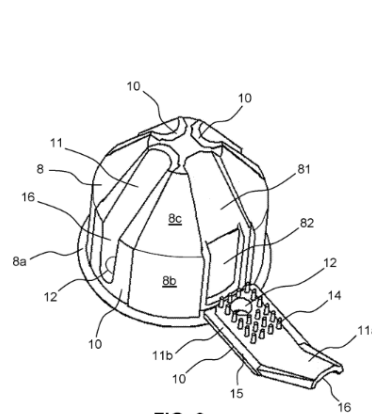


FIG. 3

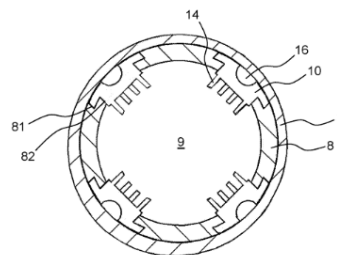


FIG. 4

29. The applicator device 1 has a removable container 60 that holds a flux composition. The container 60 is shown connected to a container connector portion 6 of the applicator device and has a rotatable base 65 which can be rotated to dispense the flux composition. The applicator device also comprises a main body 2 and an applicator head 3 which is substantially

cylindrical, and which has an open end providing a cavity 9. An end of a pipe is inserted into the open end of the cavity 9 up to the base of the cavity 9 to coat the end of the pipe with flux composition from the container 60. A centre piece 8, inserted into the applicator head, provides the cavity 9. The centre piece holds four brushes 10 which are spaced apart from one another around the circumference of the cavity 9. Each brush 10 extends from a base of the cavity 9, to the opening of the cavity 9. Each brush 10 has an aperture 12 through a base of the brush. The aperture 10 is adjacent the opening of the cavity 9. In use, the rotatable base 65 is rotated to drive the flux composition out of the apertures 12, where it is brushed onto an end of a pipe inserted into the cavity 9 by the brushes 10.

30. The main independent claim, claim 1, as originally filed reads as follows:

An applicator device for applying a composition to an end of a pipe, the applicator device comprising an applicator head, the applicator head having a cavity with an opening into which the end of the pipe can be inserted, wherein the applicator head comprises at least one brush and at least one aperture for delivering the composition into the cavity, each brush having bristles which extend into the cavity to wipe against the end of the pipe, each aperture being closer to the opening of the cavity than to a base of the cavity.

31. During the examination of the patent application, two further prior art flux dispensers disclosed in US 5908253 and GB 2470488 were brought to the attention of the applicant and an objection raised that the invention as originally claimed did not involve an inventive step having regard to the disclosure in these patents.

32. Figure 1 of US 5908253 (reproduced below) shows conduits 20 which transmit flux from reservoir 12 to pads 19. What appear to be apertures leading from conduit 20 to pads 19 are shown in figure 1, at least some of which are closer to the opening of cavity 14 than to its base. It is noted that these features are not labelled or discussed in the specification.

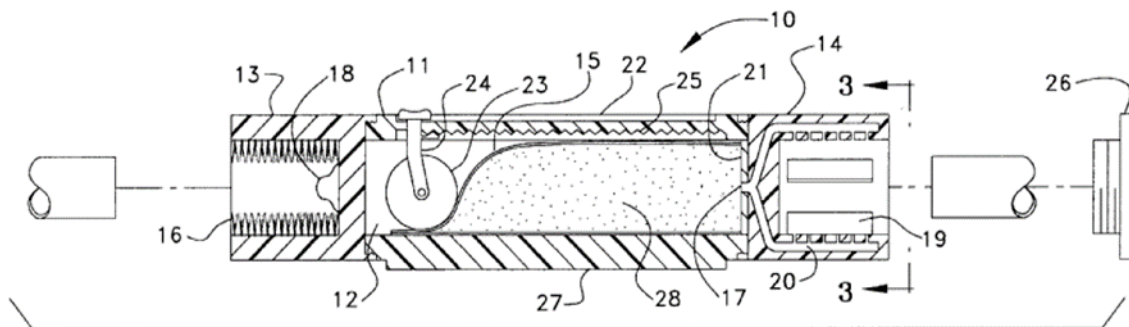
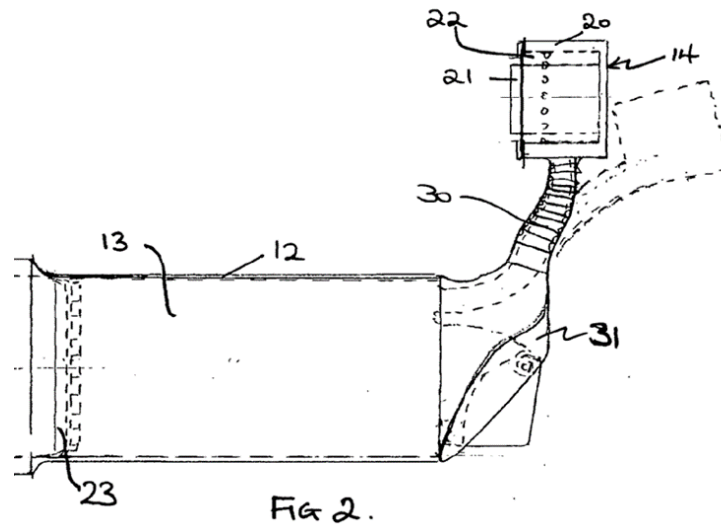


FIG. 1

33. Figure 2 of GB 2470488 (reproduced below) shows an annular flux dispensing region 22 located between a circular projection 21 and outer head wall 20. A series of small circles can be seen close to the opening of

dispensing region 22, which may be apertures. Again, it is noted that these features are not labelled nor discussed in the specification.



34. In response to the citing of these documents by the patent examiner, the applicant added the following features to original claim 1:

- i) That each brush comprises a base from which the bristles extend, and the aperture extends through the base of the brushes, to deliver the composition to the brushes (this was the subject of original claim 3)
- ii) That the applicator head comprises a centre piece which holds the base of each brush between the centre piece and an outer housing of the applicator head (subject of original claim 5) and
- iii) That the base of each brush fits into a respective slot in a periphery of the centre piece (subject of original claim 6).

35. The amended claim 1, which became the granted claim 1, reads:

An applicator device (1) for applying a composition to an end of a pipe, the applicator device comprising an applicator head (3), the applicator head (3) having a cavity (9) with an opening into which the end of the pipe can be inserted, wherein the applicator head (3) comprises at least one brush (10) and at least one aperture (12) for delivering the composition into the cavity, each brush having bristles (14) which extend into the cavity to wipe against the end of the pipe, each aperture being closer to the opening of the cavity than to a base of the cavity, wherein each brush comprises a base (15) from which the bristles extend, wherein the at least one apertures extend through the bases of the at least one brushes, to deliver the composition to the bristles, wherein the applicator head comprises a centre piece (8) which holds the base of each brush between the centre piece and an outer housing of the applicator head, and wherein the base of each brush fits into a respective slot (81) in a periphery of the centre piece.

36. In advance of the hearing both sides sought to identify the inventive concept or concepts in the patent. The claimant suggested it was a combination of the following features:

- a) Each aperture being closer to the opening of the cavity than to a base of the cavity;
- b) Each brush comprising a base from which the bristles extend;
- c) The at least one aperture extending through the bases of the brushes to deliver the composition to the bristles;
- d) A centre piece which holds the base of each brush between the centre piece and the outer housing of the applicator head;
- e) The base of each brush fitting into a respective slot in a periphery of the centre piece.

37. The defendant suggested that it is a combination of the following features;

- i. A centre piece which holds the base of each brush between itself and an outer housing of the applicator head;
- ii. The base of each brush fits into a respective slot in a periphery of the centre piece.

38. The defendant also went on to identify other potentially inventive features in the claims and description as follows:

- iii. Wherein the base of each brush defines a channel along which the composition is carried from an end of the brush adjacent the base of the cavity, to an aperture of the at least one apertures that extend through the base
- iv. Wherein the channel is defined by a trough along the base of the brush and the outer housing which seals over the trough.
- v. Wherein the base of each brush comprises a root portion which is devoid of any bristles, and wherein the channel extends along the root portion of the brush.
- vi. The four brushes and slots, being dispersed at intervals of 90 degrees.
- vii. The cylindrical and conical sections of centre piece, and its rim.
- viii. Interchangeable brushes with longer bristles.
- ix. The location of the storage bay behind the cavity.
- x. The screw threaded connection between the supplementary brush and the main body.
- xi. The size of the bristles of the supplementary brush sized to fit into the cavity to interact with the brushes therein.

39. At the hearing Mr Muir Wood confirmed that the claimant was happy to adopt this analysis of the inventive concept provided by the defendant.
40. I am however not persuaded that there are indeed so many inventive concepts. Indeed, it appears that the defendant at least appears to be adopting a claim by claim approach to determining the inventive concept that has been rejected by the Court.
41. In the appeal² of the *University of Southampton* case referred to by Lord Hoffman, in *Yeda*, Jacob L J. stated at paragraph 43:

“Next I should expand a little on the “inventive concept” for the purposes of entitlement disputes. Markem³ has already pointed out that one is not bound by the form of the claims, if any. I think there is a great danger in being over elaborate about this, about dividing the information in a patent into a myriad of sub-concepts, each of which is considered separately. One must proceed more like a hedgehog than a fox. And after all there is supposed to be only one inventive concept in a patent. (Patents act 1977 section 14(5)(d))”

42. The relevant part of *Markem* referred to above is where Jacob L J. quoted with approval the following comment by Christopher Floyd QC, sitting as a Deputy Judge, in *Stanelco Fibre Optics Ltd’s Applications*⁴:

“It is clear that a mechanistic, element by element approach to inventorship will not produce a fair result. If A discloses a new idea to B whose only suggestion is to paint it pink, B should not be a joint inventor of a patent for A’s product painted pink. That is because the additional feature does not really create a new inventive concept at all. The feature is merely a claim limitation, adequate to overcome a bare novelty objection, but having no substantial bearing on the inventive concept. Patent agents will frequently suggest claim limitations, but doing so does not make them joint inventors. Some stripping of a claim of its verbiage may be necessary to determine the inventive concept, and consequently the inventor. But one must keep in mind that it is the inventive concept or concepts as put forward in the patent with which one is concerned. . . .”

43. Jacob J. as he was then, responding in *Henry Brothers (Magherafelt) Ltd v The Ministry of Defence and the Northern Ireland Office*⁵ to an argument from one of the parties that anyone who contributes to the claim in a substantial way must be regarded as an inventor also noted that:

“I do not think it is right to divide up the claim for an invention which consists of a combination of elements and then to seek to identify who contributed which element. I think the inquiry is more fundamental than that. One must seek to identify who in substance made the combination. Who was responsible for the inventive concept, namely the combination? That was solely Mr. Z. It was his idea which turned a useless collection of elements into something which would work.”

44. Further in the *University of Southampton* case in the High Court⁶, Laddie J. in considering the question of who a devisor is, referred to the comments of

² *University of Southampton’s Applications* [2006] EWCA Civ 145; [2006] R.P.C 21

³ *Zipher Limited v Markem Systems Limited*, [2009] EWCA Civ 44, 2009 WL 289287

⁴ *Stanelco Fibre Optics Ltd v Bioprogress Technology Ltd* [2004] EWHC 2263 (Pat); [2005] R.P.C. 15

⁵ *Henry Brothers (Magherafelt) Ltd v The Ministry of Defence and the Northern Ireland Office* [1997] R.P.C 693

⁶ *IDA Ltd v University of Southampton*, [2004] WL 1476779 (2004)

Fysh J. in *Markem* at first instance where he noted:

42. *Mr. Alexander's references to enabling disclosure appear to be based on Markham Corporation v. Zipher Ltd (No 1)[2004] RPC 10, 203–232 a judgment of His Honour Judge Fysh Q.C. (sitting as a judge of the High Court). At paragraph 41, he considered the meaning of the word “devisor” in s.7(3). He said:*

“Secondly, the subsection uses the word ‘devisor’ in relation to the inventor, not ‘maker’ or ‘the person who reduced a particular proposal into practice’. The word devise has, I consider, a slightly broader signification than ‘make’ or ‘implement’; viz. that of planning a particular course of action before even that course of action is actually implemented. Such usage well accords with the jurisdiction which was intended to encompass an inventor's work prior even to the making of a patent application. But there must be a limit; an invention cannot be ‘devised’ merely by the statement of an inchoate desideratum or a goal — what Mr. Speck characterised in argument as a ‘wish list’. With this in mind, the facts of the particular case will provide the court with material to decide whether an inventor has yet devised an invention.”

43. *This appears to be wider than the formulation adopted by Jacob J. in Henry Brothers . Fysh H.H.J. then referred to Collag Corp. v. Merk & Co. Inc [2003] FSR 216 and, in particular, to the following passage in Pumfrey J.'s judgment in that case:*

“Before turning to the facts, I should point out that where there are a number of different contributions to the inventive concept described in a patent application, I do not think it correct to look only at the contributions that are inventive ... If the invention is a combination, in which the feature which distinguishes the invention from the prior art is contributed by one person, but all the rest by another, I do not believe it is necessarily correct to say that the latter is, or must be, the sole inventor. It becomes a question of fact. Thus, if one asks Jacob J.'s question in the Henry Brothers case at first instance ..., the question is: Who was responsible for the combination? In that case, the inventor was the person who turned ‘a useless collection of elements into something which would work’. On its facts, there was nothing without the contribution of a man found to be the sole inventor.”

45. Taking this line of authorities into account, it is clear that in assessing what the inventive concept or concepts are, I can and should have regard to the claims. This must be especially so where the patent has been granted. But that assessment is not simply about looking for features in the claims that may be novel and non-obvious.

46. Much has been made in these proceedings of what is disclosed in the prior art especially in relation to the position of the apertures through which the flux flows into the cavity relative to the opening of that cavity. That at least one of the prior art identified by the examiner shows the openings near to the opening of the cavity does not necessarily exclude that feature from forming part of the inventive concept in the invention here when it is combined with other features. I would make one further comment on the inventive concept and that is that that inventive concept can reside in how features of the invention interact not just in terms of the operation of the device but also in terms of features that simplify the manufacture and assembly of the device.

47. Hence taking everything into account, I have concluded that the inventive

concept here is the combination of the idea of having a tool for applying flux to a tube using brushes where the tube is inserted into an cavity and where flux is applied through apertures in the brushes at the front of the cavity, in combination with the use of the centre piece to mount the brushes. I would add a second inventive concept in the form of how the bases of the brushes and the head of the tool provide the flow channels for the flux.

48. I turn now to consider who contributed these inventive concepts. To do that I need to understand how the tool came about.

The development of the Fluxuator

The initial idea

49. It is not in dispute that Mr Fowls had the original idea for providing a tool to apply flux to pipes. It is also not in dispute that in early 2014, Mr Fowls shared this idea with Mr Zacharias though the precise circumstances by which they came to share the idea was the subject of some dispute. Mr Fowls originally stated that he first began thinking of a flux applicator in 2008 but did not pursue the idea at the time. According to Mr Fowls' witness statement, he first met Mr Zacharias in early 2014 when he began working on his burger stall. Some months later they began discussing Mr Fowls' idea for a flux applicator.
50. Mr Zacharias however provided evidence that his burger business ceased trading in December 2013. When presented with this Mr Fowls clarified that he had worked on the burger stall in 2013 but by 2014 was working for Mr Zacharias on construction projects relating to railways.
51. There is no dispute that Mr Fowls initial idea was for a tool to apply flux consisting of a container with an applicator head at the top which was round with brushes in the end. A pipe would be inserted into the applicator head and the container squeezed to apply flux to the pipe.
52. Mr Zacharias and Mr Fowls each claim that they then began working separately on ideas for the device. They each claim to have produced a number of drawings in the period following their initial discussion and when they approached BWR in January 2015. These drawings are the subject of some dispute.

Drawings by Mr Fowls

53. In his first witness statement Mr Zacharias includes several drawings that he says were produced by Mr Fowls. Mr Fowls in contrast relies on just three of these drawings in his witness statement. These are shown below. Both DF1, which is signed by Mr Fowls and dated September 23rd 2014, and DF2 which is signed by Mr Fowls and dated November 4th 2014, were included with the witness statement of Mr Zacharias. A drawing similar to DF3 (also shown below) but without the annotations was provided by Mr Zacharias. I will return to the annotations shortly as they were the subject of some dispute. There was however no dispute that Mr Fowls produced these

drawings and in respect of DF1 and DF2 that Mr Fowls produced them on the dates indicated.

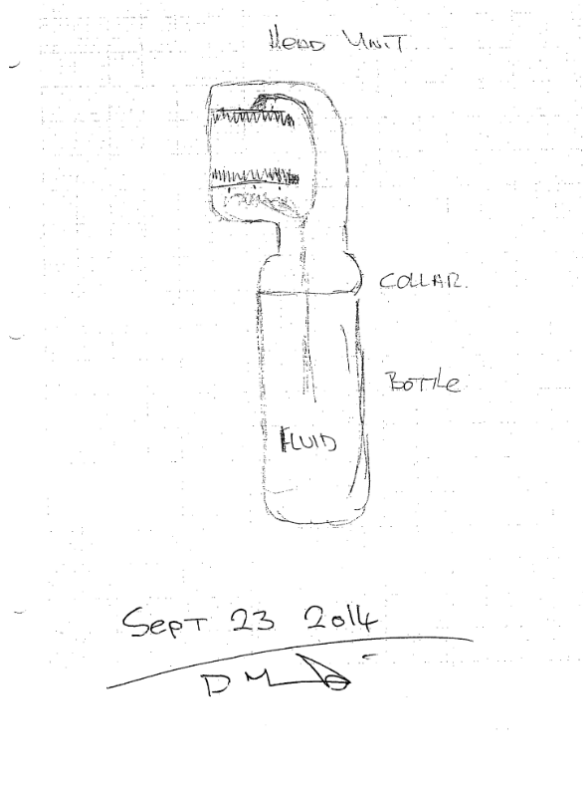


Figure DF1

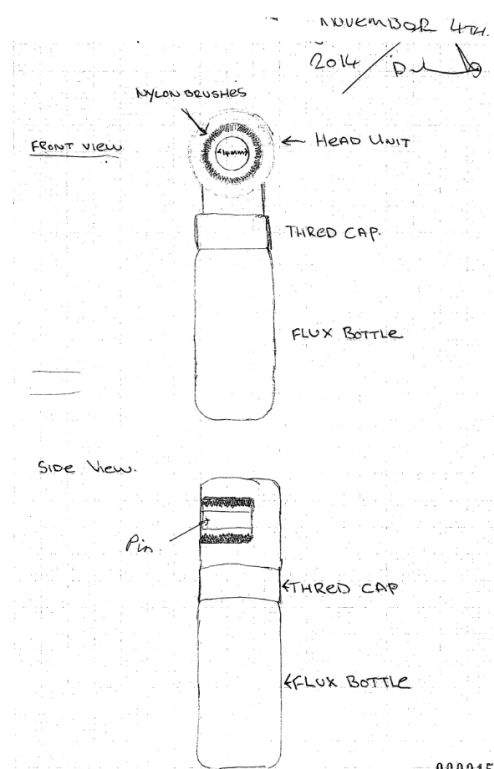
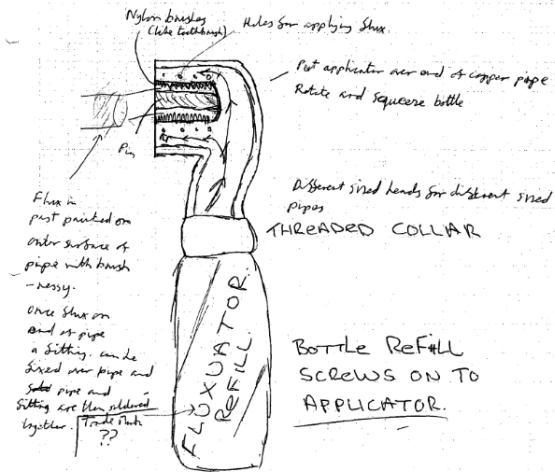


Figure DF2

23/1/15



SMALL, COMPACT.

NO MESS.

MORE HEALTH + SAFETY - avoid contact with skin
demonstrating

DWA

Dominic Fowles inventor
Andrew Zachary joint applicant as he's providing much of the funding.

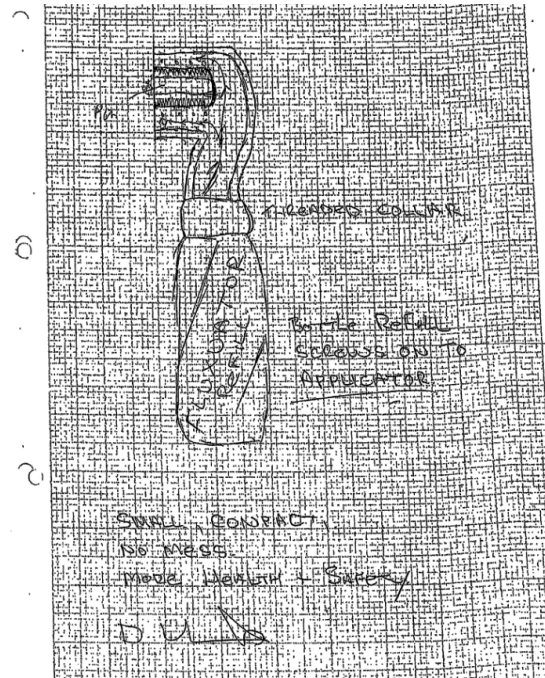


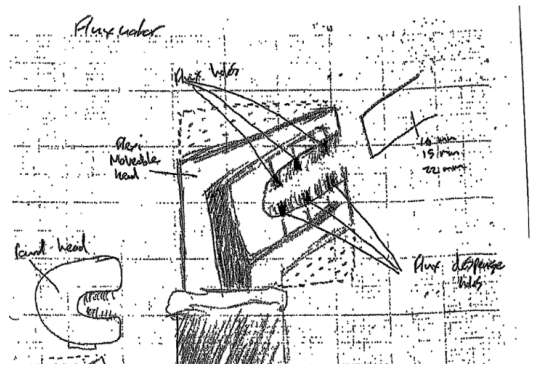
Figure DF3 (with and without annotations)

54. The date that DF3 was produced is not clear. The date on the drawing with the annotations is the date of the meeting between Mr Fowles, Mr Zacharias and Mr Robinson of BWR. Mr Bridge-Butler suggests that the date together with the annotations were added by Mr Robinson on that date although this is challenged by Mr Zacharias.

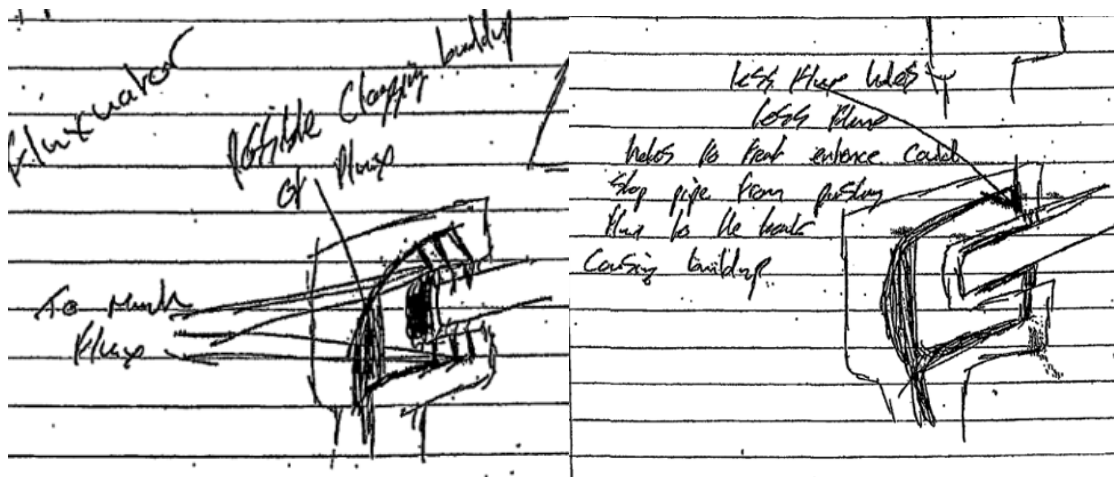
Drawings by Andrew Zacharias

55. Mr Zacharias has provided copies of eleven drawings that he claims he did in the period between 16th September 2014 and 10th November 2014 and which he says demonstrate many of the features of the invention. The drawings are each signed and dated by Mr Zacharias.

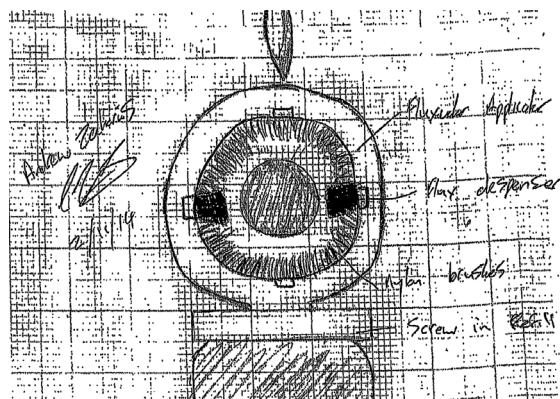
56. More specifically, Mr Zacharias claims that the idea of having the flux flowing through channels behind the brushes and emerging only through apertures near the front of the cavity was his. He suggests that his initial drawing shows apertures at the front, middle and rear of the cavity however after doing some further research and talking to plumbers he realised that to avoid over-fluxing it was preferable to have the apertures just at the front.



57. Mr Zacharias points to the following drawings dated 31st October 2014, which are annotated with his concerns about “To (sic) much flux” and “possible clogging buildup of flux” and then suggests “less flux holes” “holes to front”. The drawing on the right does show what appears to be flux apertures at the front of the cavity. The annotation reads “less flux holes less flux holes to front entrance could stop pipe from pushing flux to the back causing buildup” with a further annotation saying that this “could reduce buildup of flux”.



58. Mr Zacharias also argues that one of his drawings shows the brushes being held in by a centre piece. The drawing he is referring to is shown below.



59. Mr Zacharias suggests that the brushes extend around the inside of the head and the centre piece, which I took to be the shaded circular part in the middle, holds the brushes at the back and at the front using clips. It is difficult to see this in the drawing, even recognising that it is much more of a sketch than the formal drawings in the patent. I will return to these drawings later as there was some dispute as to when they were produced and who they were shared with.
60. During cross examination, Mr Zacharias accepted that he did not design the overall shape of the centre piece with the cylindrical part and the conical part. He also accepted that he did not come up with the idea of having four equally spaced brushes nor having the brushes removeably mounted in slots in the centre piece.
61. Mr Zacharias also referred to a prototype that he and Mr Fowls had produced however by Mr Zacharias' own admission this was simply a crude prototype which lacked any brushes or apertures and was essentially produced merely to show a possible external form for the tool.

The involvement of Baron Warren Redfern (BWR)

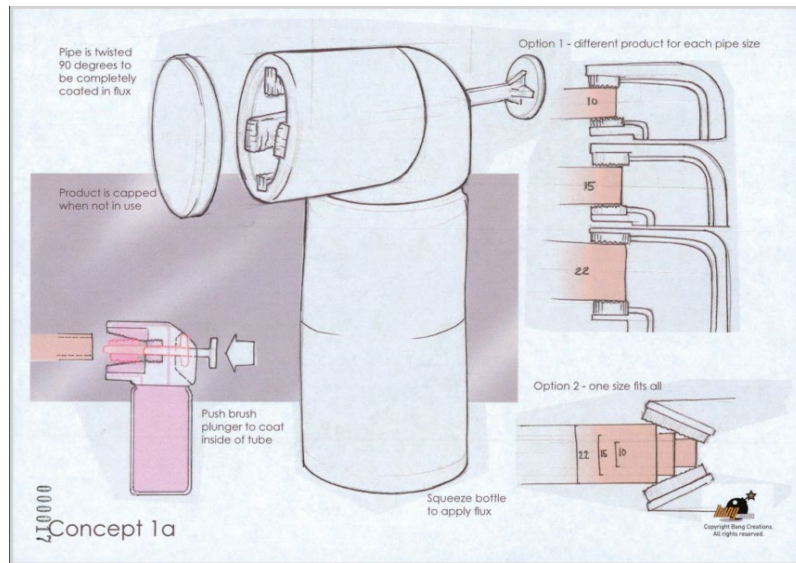
62. It is not in dispute that Mr Zacharias approached BWR on 2nd December 2014 to discuss obtaining protection for the intellectual property in the Fluxuator. A meeting subsequently occurred attended by Mr Zacharias, Mr Fowls and Mr Michael Robinson of BWR on 23rd January 2015. There is however some disagreement about what both Mr Zacharias and Mr Fowls brought to the meeting. Mr Zacharias claims that he left Mr Robinson with a "file of our [his and Mr Fowls'] research and sketches of how the product was to look".
63. Mr Zacharias has provided a copy of an email he sent to Ms Irena Kantor of BWR on 4th February 2015 which refers to a folder of sketches of how the product would look having been left with Mr Robinson.
64. Mr Fowls contended originally in his first witness statement that he had drawn another sketch for the meeting (DF3). He claims he gave this to Mr Robinson at the meeting and that Mr Robinson added the various annotations shown above during the meeting. In the next sentence Mr Fowls however notes that Mr Robinson looked at the "drawings" which suggests more than one drawing may have been presented.
65. At the hearing, Mr Muir Wood pressed Mr Fowls on the events of this initial meeting with BWR to clarify which drawings were taken, and whether Mr Robinson had made notes on one of the drawings or another piece of paper. Mr Fowls replies suggested that his recollection of that meeting was not especially clear though he did believe that he only took one drawing to the meeting. He recalled Mr Robinson taking notes though when pressed he accepted that he could not be sure if Mr Robinson had made notes on his drawing or on a separate piece of paper.

66. Mr Fowls did recall that Mr Zacharias did leave a folder with Mr Robinson and when pressed also accepted that he was not sure what was in that folder. He did however maintain that he had not, until these proceedings, seen any of the drawings that Mr Zacharias claims to have produced and handed over to Mr Robinson at the meeting.
67. Mr Zacharias maintains that Mr Robinson took notes on a separate piece of paper rather than on any of the drawings. Mr Robinson has not supplied a witness statement, so I am unable to get as full a picture of exactly what happened at that first meeting as I could have. Mr Bridge-Butler has provided a witness statement in which he states that at the meeting on the 23rd January, Mr Zacharias and Mr Fowls provided four preliminary sketches of the Fluxuator. These were the four figures produced by Mr Fowls, DF1, DF2 and DF3 without the annotations and a further drawing that is not relevant to the issue here. Mr Bridge-Butler states that Mr Robinson made notes on DF3, at the meeting and added the date of 23rd January 2015. Mr Bridge-Butler also noted that BWR has no record of Mr Zacharias' drawings
68. Following the meeting on the 25th January, Mr Robinson carried out a search for relevant prior art which revealed GB2470488. In an email of 27th January 2015, he explained to Mr Zacharias that it "appears that any differences between Dominic's invention and at least GB2470488 would be likely to be considered an obvious improvement and it is therefore unlikely that patent protection would be able to be obtained for the invention."

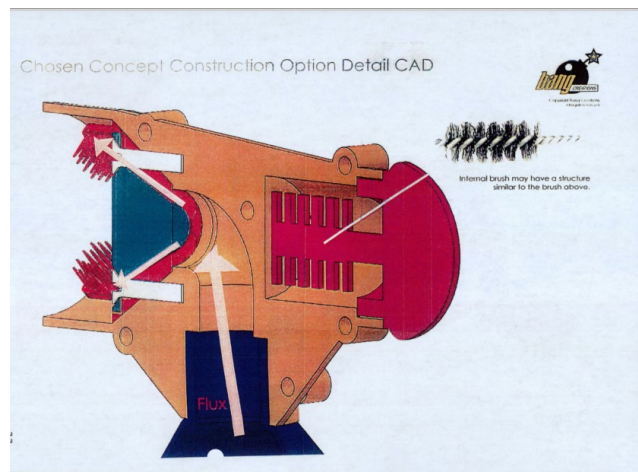
The involvement of Bang Creations

69. At the recommendation of BWR, Mr Zacharias approached Bang Creations, a product design company, for help in developing the initial idea for the Fluxuator into a marketable product.
70. The initial approach, which was in March 2015, was followed by Mr Zacharias and Mr Fowls submitting to Bang Creations a Non-Disclosure Agreement (NDA) between Mr Zacharias, Mr Fowls and Bang Creations and a completed questionnaire setting out some of the background and aims of Mr Zacharias and Mr Fowls. According to Mr Stefan Knox, Bang Creations received these on 15th March 2015. Mr Knox further contends that the three drawings DF1, DF2 and DF3 were also provided to them at that time, though drawing DF3 did not have the annotations on it that Mr Fowls claims were added by Mr Robinson.
71. Mr Zacharias and Mr Fowls then had their first meeting with Bang Creations on the 16th April 2015. No note of this meeting has been provided, but both parties appear to agree that Mr Zacharias, Mr Fowls and Mr Stefan Knox and Mrs Kirstin Knox, both of Bang Creations, were present at the meeting.
72. Following the meeting in April, Mr Zacharias and Mr Fowls formally entered into an agreement with Bang Creations for Bang Creations to develop the Fluxuator into a commercial product. According to Mr Knox, between April 2015 and June 2015, he worked with his colleague, Mr Theodore Davies on

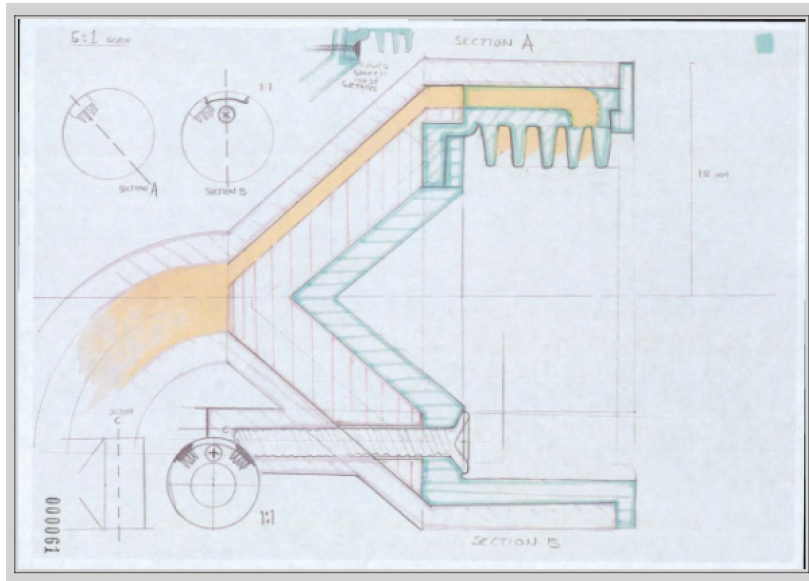
initial concepts for the design. The first concept drawing he contends that he and Mr Davies produced is shown below.



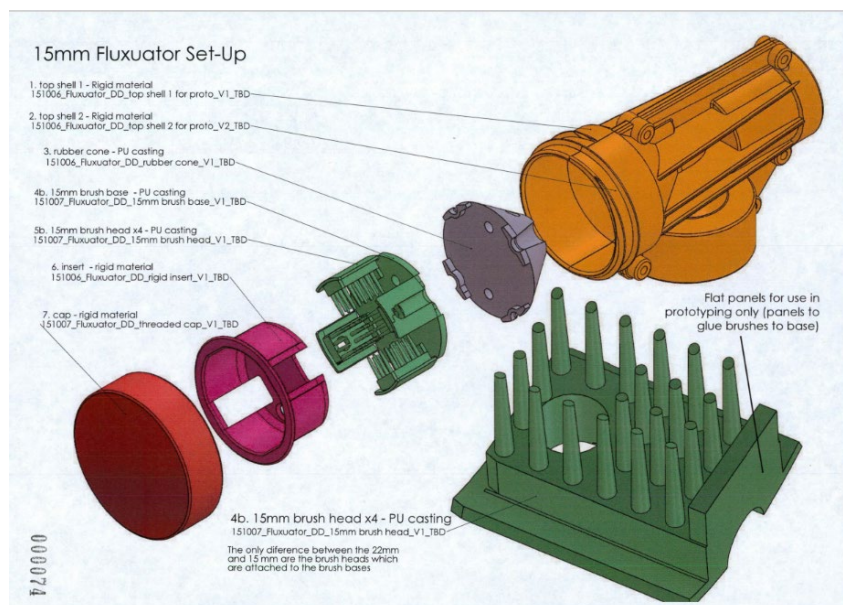
73. Mr Knox then goes on to explain that he presented several concepts to Mr Zacharias in early June 2015 and “following a call with Andrew Zacharias, we re-designed the brush feature to improve it slightly”. The brush Mr Knox is referring to is a separate small brush that could be used instead of the tool to manually apply the flux. There was also a decision taken around this time to focus on the first concept. This was then developed further with further drawings, including as below, sent to Mr Zacharias in July 2015.



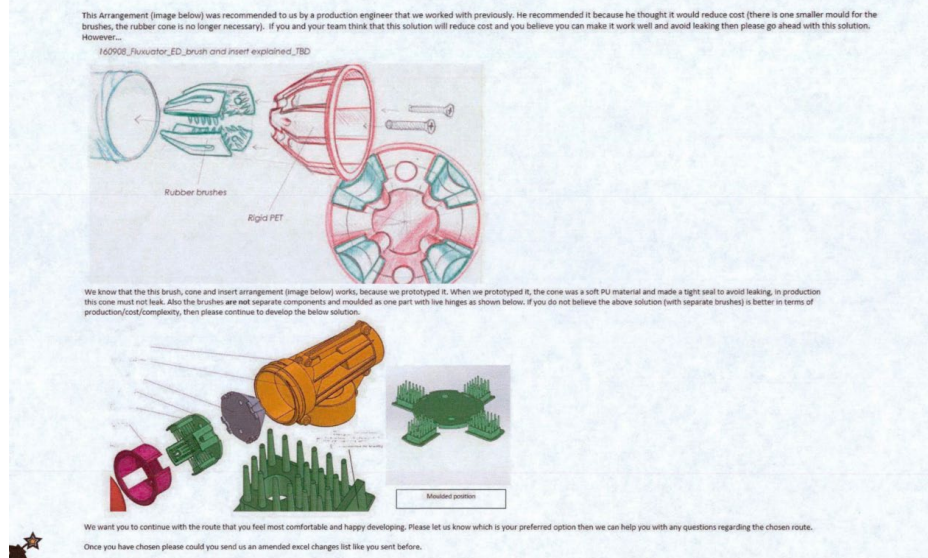
74. A further diagram which Mr Knox suggests shows further design work done by Bang Creations and which was shared with Mr Zacharias and Mr Fowls on 29th September 2015 is shown below. This appears to show the apertures for dispensing the flux near the opening of the cavity.



75. A project update dated 8th October 2015 showed further development of the internals of the Fluxuator with 4 brushes mounted on a base and housed in cut-outs in an insert.



76. The concept was further developed up until around December 2016 which is when the patent application was filed. Mr Knox has provided diagrams showing the development of the Fluxuator during this period. The diagram below which is dated 9th September 2016 is the earliest diagram put forward that appears to show the arrangement of centre piece and brushes set out in the embodiment of the patent application. This diagram is contained in a Product Development Report produced as an internal document by Bang Creations and dated 22nd September 2016. Mr Knox notes that the upper embodiment in the diagram reflects some work they had done to reduce the cost of manufacture by eliminating the cone shaped component in the embodiment shown in the lower embodiment.



The formation of Dazcom

77. On 5th February 2015 Mr Fowls and Mr Zacharias entered into a formal business partnership. The purpose of the partnership, according to the partnership agreement was the manufacture and marketing of the product named the Fluxuator. The agreement states that the firm name of the partnership will be "Dazkom". This was presumably subsequently changed to Dazcom. Their signatures appear on the final page and are dated 26th February 2015. Paragraph 6 of that document describes the contribution of each partner as follows:

Partner 1 – Mr Dominic Fowls
Contribution Description – The inventor of the Fluxuator
Agreed value - 50%

Partner 2 – Mr Andrew Zacharias
Contribution Description – Financier and Producer
Agreed Value – 50%

78. Later in March 2015, Mr Zacharias completed an engagement form with Bang Creations where he again referred to himself as "financier".

79. At the hearing Mr Bridge-Butler asked Mr Zacharias why he had signed these documents with the title "financier" and not as an "inventor". Mr Zacharias explained that he didn't know what an inventor was at that time. He believed an inventor was the person who came up with the initial idea, which in this case was Mr Fowls.

80. On 15th September 2015, Dazcom was incorporated for the purpose of bringing the Fluxuator to market. Mr Zacharias and Mr Fowls each had 40% of the shares with the remaining 20% being held by a Mr Des Evans.

81. There was some discussion as to whether Mr Zacharias and possibly Mr Fowls were at the material time the clients of BWR and Bang Creations rather than Dazcom. Mr Bridge-Butler accepted that BWR had initial new client forms for both Mr Zacharias and Mr Fowls but that they did not obtain a new form for Dazcom when that company was formed. He suggested that this was a clerical error on the part of BWR that in his view does not mean that Dazcom was not BWR's client. He notes that on 5th November 2015 Mr Zacharias asked BWR to reissue all the invoices that he had paid to BWR in the name of Dazcom Ltd so that he could put them through the company. Mr Bridge-Butler argued that at that point it was "manifestly the case" that Dazcom rather than Mr Fowls and Mr Zacharias was BWR's client.
82. The initial non-disclosure agreement with Bang Creations was with Mr Fowls and Mr Zacharias with the agreement being signed by both Mr Fowls and Mr Zacharias and also Stefan Knox on behalf of Bang Creations on 15th March 2015. Bang Creations then sent a proposal document to Mr Zacharias which he duly signed and returned. According to Mr Knox, Mr Zacharias advised Bang Creations at their initial meeting that all correspondence from Bang Creations should be sent to him. I was presented with ample evidence to show that this is what subsequently happened.
83. Mr Knox also noted that Mr Zacharias had informed him about the formation of Dazcom and asked for all invoices to be made out for payment by Dazcom which he did.

The filing of the patent application

84. According to Mr Bridge-Butler, Mr Zacharias phoned him on 26th February 2016 to discuss filing a patent application for the latest design of the Fluxuator produced by Bang Creations. Mr Bridge-Butler advised him that it would not be possible to get a patent for the general idea of a hand tool comprising an annular head for applying flux. He went on to explain that any patent would have to relate to the finer details of the construction of the device.
85. On 7th April 2016, Mr Zacharias sent Mr Bridge-Butler an email requesting that BWR prepare a patent but that he should contact Mr Davies regarding the latest design. Mr Bridge-Butler responded by email to Mr Zacharias on the 12th April 2016 to say that Mr Davies had informed him that the design of the internals of the device were likely to change and that it will be some months before the final design is known. Mr Bridge-Butler then advised Mr Zacharias that they should await the final design before proceeding with the patent.
86. Some six months later, Mr Davies contacted Mr Bridge-Butler to inform him that the design process was nearly complete. Mr Gareth Ashton, a patent attorney at BWR, was tasked with drafting the patent. Mr Aston obtained details of the invention from Mr Davies. He also corresponded with Mr Zacharias to confirm that the patent application should proceed and that invoices should be directed to Dazcom.

87. Mr Zacharias also refers to an email exchange between Mr Ashton and Mr Davis dated 4th November 2016 where Mr Ashton comments on what he considers may be patentable features in the Fluxuator, particular in the light of the prior art document GB 2470488 which he had found. He highlights that the prior art tool suffers from the problem that a large amount of flux needs to be injected into the cavity to properly coat the pipe. Specifically, since the flux is injected at the base of the cavity, it may be difficult to coat parts of the pipe that are an inch or so from the very end of the pipe, and an excessive amount of flux may stick to the very end of the pipe. Also, large amounts of flux may accumulate at the base of the cavity over time.

88. He goes on to say:

“according to my understanding, Zach’s applicator device solves these problems by injecting the flux into the cavity at the entrance to the cavity, not at the base of the cavity.”

89. He then recommends that the patent application should have independent claims covering the following:

- The applicator head which injects flux onto brushes at the entrance to the cavity
- The supplementary brush which plugs into an opposite end of the device from the head
- The applicator head in combination with the refill
- The method of adding a refill to the applicator head and applying flux to a pipe
- The refill

90. The draft patent application was sent by Mr Ashton to Mr Zacharias on the 8th December 2016. In the covering email Mr Aston asks Mr Zacharias to “check the application” as well as confirming he was content to proceed with it. Mr Aston notes that “According to my understanding, the application is to be filed in the name of Dazcom Ltd.”. He goes on to ask Mr Zacharias to “confirm who the inventors are” so that he could prepare the assignment contracts for assigning their shares in the invention to Dazcom.

91. Mr Zacharias responded to say that he was happy to proceed with the application though he had asked Mr Knox to “run his eyes over it” as he had a better understanding of patents.

92. Mr Knox responded in an email to Mr Aston and Mr Zacharias dated 12th December 2016 to indicate that he thought the patent application had covered everything. He noted that he and Mr Theodore Davies were the inventors. Mr Ashton confirmed by email on 14th December 2016 to Mr Zacharias that the application would “name Dazcom Ltd as the Applicant (owner) and will name Stefan and Theo as the inventors”. He went on to

explain that Stefan Knox and Theo Davies “will assign their rights in the invention to Dazcom once the application has been filed”.

93. The application was duly filed on the 14th December 2016 which Mr Ashton confirmed in an email to Mr Zacharias dated that day. In that email Mr Ashton reminded Mr Zacharias that it was necessary for “the inventors (Stefan and Theo) to sign assignment contracts transferring their rights in the invention to Dazcom Ltd”. These contracts clearly identified each of Mr Knox and Mr Davies as “an inventor of the invention entitled “AN APPLICATOR DEVICE” which is described in GB Patent Application GB 1621241.7”. The individual contracts were signed by Mr Knox and Mr Davies and then countersigned by Mr Zacharias.
94. The required Statement of Inventorship was filed at the IPO on the 16th December 2016. A copy of this, identifying Mr Knox and Mr Davies as the inventors was sent to Mr Zacharias on the same day. A copy of the published patent application again listing Mr Knox and Mr Davies as the sole inventors, was subsequently sent to Mr Zacharias in July 2018.

Breakdown in the relationship

95. At some point in 2018 the relationship between Mr Fowls and Mr Evans and Mr Zacharias broke down. The reasons for that are not I believe relevant here.
96. In November 2018 Mr Zacharias requested from BWR a copy of their file relating to the patent. This was provided later that month to Mr Zacharias at a cost to him of £200. Mr Bridge-Butler conceded at the hearing that the copies of the drawings claimed to have been provided by Mr Fowls at the meeting and that he claims were annotated by Mr Robinson were not in the copy of the file sent to Mr Zacharias. He explained this omission by noting that files at BWR typically comprise three parts and that due to an oversight only the middle part had been copied for Mr Zacharias.
97. Mr Zacharias wrote to BWR on 8th December 2018 claiming that since the invention had been made by him and Mr Fowls before the involvement of Bang Creations or the formation of Dazcom, then the patent application should be changed to show he and Mr Fowls as the sole applicants and inventors. There were further letters from Mr Zacharias to BWR on 13th and 17th of December.
98. In its response to these letters, BWR sought to explain to Mr Zacharias the relevance of the claim and the prior art in terms of determining what the inventive concept is together with their understanding of what the inventive concept is in the patent application. BWR went on to note, after having set out its understanding of the inventive concept, that:

“However if the true situation is in fact different to that set out above, and in particular if you and/or Dominic Fowls came up with the idea of positioning each of the apertures closer to the opening of the cavity than to the base, then you would need to now make this clear so that appropriate remedial action could be taken. If this were the case, then you and/or Dominic Fowls would assume the identity of an inventor

giving you and/or Dominic Fowls the right to the patent applications, or the right to assign inventorship rights to another party so that it could be the applicant.”

99. There is nothing before me to suggest that Mr Zacharias replied to this letter from BWR. Rather it appears that he then moved to consider formal proceedings with the filing of this reference in February 2019.

The significant facts in dispute

100. Having set out the how the Fluxuator was developed and patented, I turn now to the main issues in dispute. The first issue is the drawings that Mr Zacharias claims he produced showing aspects of the invention and which he claims were shared with at least Mr Fowls, Mr Robinson and Mr Knox. The second issue is the extent of Mr Zacharias’ contribution to the development work undertaken by Bang Creations.

Mr Zacharias’ drawings

101. The drawings that Mr Zacharias has submitted do show the possible importance of having the apertures for the flux near to the opening of the cavity. This I have found is a part of the inventive concept in combination with other features of the device. Hence if Mr Zacharias produced and shared these drawings as he claims with Mr Robinson in January 2015 and Mr Knox and Mr Davies in April 2015, then he is in my opinion at least partly entitled to be named as the deviser of the invention. However, the evidence before me does not support this.
102. The most telling evidence on this issue is that of Mr Knox and Mr Bridge-Butler who I found to be both credible witnesses. Mr Knox had originally stated that he had not seen these drawings until they were produced as evidence in these proceedings. Under cross-examination he retreated very slightly from this position by saying that he had “no recollection” of seeing them previously. He continued however to maintain that only Mr Fowls’ drawings were shared at his meeting with Mr Zacharias and Mr Fowls in April 2015. This is at odds with Mr Zacharias’ claim that he also shared his drawings at this meeting.
103. Mr Knox goes on to note that he can find no record of these drawings in the records of Bang Creations. He says that he has checked with Mr Davies and his wife, Mrs Kirstin Knox who also works for Bang Creations and who was involved in the development of the Fluxuator, and neither of them had any recollection of seeing the drawings prior to these proceedings.
104. Mr Bridge-Butler asserts that not only had he not seen these drawings before these proceedings but there is no record of these drawings in BWR’s case file relating to the application. Mr Bridge-Butler contends that four drawings, all from Mr Fowls, were presented to Mr Robinson when he met with Mr Fowls and Mr Zacharias in January 2015.
105. Mr Muir Wood however rightly pointed out that Mr Bridge-Butler was not at this meeting hence his evidence of what happened is hearsay based as it is on his conversations with Mr Robinson. Similarly, Mr Knox’s evidence about

Mr Davies and Mrs Knox having no recollection of Mr Zacharias' drawings is also hearsay.

106. Under section 1(1) of the Civil Evidence Act 1995, hearsay is admissible as evidence. However, under section 4, in estimating the weight (if any) to be given to hearsay evidence, I must have regard to any circumstances from which any inference can reasonably be drawn as to the reliability or otherwise of the evidence. In particular, I must have regard to the following:

- i. whether it would have been reasonable and practicable for the party by whom the evidence was adduced to have produced the maker of the original statement as a witness;
- ii. whether the original statement was made contemporaneously with the occurrence or existence of the matters stated;
- iii. whether the evidence involves multiple hearsay;
- iv. whether any person involved had any motive to conceal or misrepresent matters;
- v. whether the original statement was an edited account, or was made in collaboration with another or for a particular purpose;
- vi. whether the circumstances in which the evidence is adduced as hearsay are such as to suggest an attempt to prevent proper evaluation of its weight.

107. There is no suggestion that Mr Knox or Mr Bridge-Butler had any motive to conceal or misrepresent matters or that the statements they are relying on were edited in any way. Further I do not believe there is anything to suggest that this evidence has been adduced in any way other than to allow a proper evaluation of its weight.

108. Mr Muir Wood however argued that it was harmful to Mr Zacharias' case that the defendants did not call as witnesses either Mr Robinson, Mr Davies and to a lesser extent, Ms Kantor and Mr Ashton both of BWR. He suggested that Mr Robinson could have provided a brief statement as to what drawings were shared with him at the meeting with Mr Zacharias and Mr Fowls and then been briefly cross-examined on that. This would have negated the need for the defendant to rely on hearsay evidence.

109. Mr Muir Wood directed me to *Wisniewski v Central Manchester Health Authority*⁷. In this case, which concerns a case of medical negligence, a doctor who was a key witness, provided some short-written statements but did not make himself available to be cross-examined.

⁷ *Wisniewski v Central Manchester Health Authority* [1998] P.I.Q.R. P324

110. In considering the implications of the failure of this witness to attend for cross-examination, Brooke LJ. giving the leading judgement derived the following principles from previous authorities:

(1) In certain circumstances a court may be entitled to draw adverse inferences from the absence or silence of a witness who might be expected to have material evidence to give on an issue in an action.

(2) If a court is willing to draw such inferences, they may go to strengthen the evidence adduced on that issue by the other party or to weaken the evidence, if any, adduced by the party who might reasonably have been expected to call the witness.

(3) There must, however, have been some evidence, however weak, adduced by the former on the matter in question before the court is entitled to draw the desired inference: in other words, there must be a case to answer on that issue.

(4) If the reason for the witness's absence or silence satisfies the court, then no such adverse inference may be drawn. If, on the other hand, there is some credible explanation given, even if it is not wholly satisfactory, the potentially detrimental effect of his/her absence or silence may be reduced or nullified.

111. Drawing on the principles above, Mr Muir Wood suggested I should therefore give more weight to Mr Zacharias' version of what happened at the meeting with Mr Robinson especially in relation to the drawings he claims to have handed over.

112. Mr Bridge-Butler's response to this was to note firstly that in *Wisniewski* the whole case turned on what the absent witness did or did not do. Further he notes that whilst the absence of a witness can strengthen or weaken a case, the absence of a witness in itself is not determinative. He goes on to note that the key difference here is that the claimant has not provided a case to answer. He suggests that nothing that Mr Robinson could confirm or deny has anything to do with who invented the subject matter of the patent. In fairness to Mr Bridge-Butler he was making this argument based on his understanding of what the inventive concept was. I have however found that it does include features shown in the drawings of Mr Zacharias. Hence there is a case to answer that does turn on these drawings.

113. Mr Bridge-Butler went on to explain that the reason why Mr Robinson had not provided a witness statement was simply a matter of cost. I have some sympathy for this argument especially given that Mr Bridge-Butler who is more senior to Mr Robinson was giving evidence, and because it was not apparent at the time that Mr Robinson could really add anything given the defendant's understanding of the matters in issue.

114. Hence, I am not inclined to draw any adverse conclusions from Mr Robinson's failure to provide a witness statement. In terms of the weight to give to the hearsay evidence relating to Mr Robinson then I do not believe it would be appropriate to devoid that evidence of all its weight. And the weight it has is against Mr Zacharias. I would further note that if I disregarded it entirely, I still do not believe that would have altered my conclusion. The direct evidence of Mr Knox and Mr Bridge-Butler is already

telling. On top of that there is also significant circumstantial evidence to show that Mr Zacharias did not share these drawings when he claimed.

115. Firstly, there is the way that the design evolved. Noticeable is the fact that the feature of the apertures for the flux being nearer the opening of the cavity was not present in the earlier prototypes produced by Bang Creations. Indeed, the early prototypes produced following the meeting with Mr Zacharias had the flux entering at the opposite end of the cavity. If Mr Zacharias' drawings had been shared with Bang Creations then I would have expected this feature to have been prominent from the start or failing that, some tangible evidence explaining why they had ignored this suggested advantage. That is not present. There is also nothing before me to suggest Mr Zacharias challenged the early absence of this feature. His response when challenged on this during cross examination that he was "being led" by Bang Creations was not convincing.

116. Secondly there were Mr Zacharias' unconvincing responses when he was challenged on the annotations on his drawings relating to having the apertures nearer the opening. Mr Bridge-Butler asked if there was any special significance to these annotations. He asked Mr Zacharias why there was so much focus in the drawings on the position of the apertures and whether at the time Mr Zacharias thought it particularly important. Mr Zacharias basically admitted he could not remember why he had added the notes. This is brought out in the following exchanges between Mr Bridge-Butler (JBB) and Mr Zacharias (AZ):

JBB. Why did you write these notes?

AZ. I was just sitting there writing notes of it all.

JBB. Would you say that it was of particular importance to you that this was an issue you needed to solve?

AZ. At the time I did not know

JBB. Is it not the case that in this drawing you are placing specific emphasis on the fact that the holes need to be near the front?

AZ. I would not be specific because I am just sitting there doodling trying all different drawings and ideas, so I do not know

JBB. Okay, at the bottom it says I believe "I think could reduce building up of flux": is that correct?

AZ. It does say that, yes

JBB. Did you write that?

AZ. That is my handwriting yes

JBB. Can you tell me why you would have written that?

AZ. I do not know at the time, no.

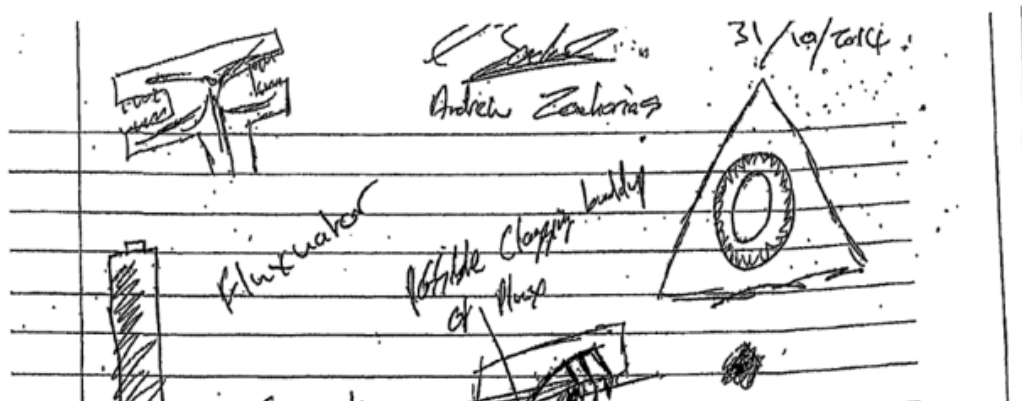
117. This is at odds with Mr Zacharias' witness statement where he recalled in some detail and certainty how he had discussed the idea for the flux tool with one plumber in particular who identified a possible problem with flux getting pushed back into the pipe causing contamination and corrosion. Mr Zacharias said this led to his idea of having fewer apertures and having them closer to the front which he then incorporated into his drawings in November 2014. In addition to the inconsistency between his oral and written evidence, I would observe that Mr Zacharias has not provided any evidence to substantiate this discussion with this particular plumber.

118. Thirdly, there is the general absence of any reference to Mr Zacharias' drawings until these proceedings had been launched. It is accepted when Mr Zacharias and Mr Fowls met with Mr Robinson that they left behind a folder. Mr Zacharias emailed a colleague of Mr Robinson, Ms Kantor, shortly after the meeting referring to the folder as containing research on the Fluxuator that they had done as well as "rough drawn sketches of how we would like our product to look". Mr Zacharias suggests he was referring to his drawings though he does not refer explicitly to the provenance of those sketches. He also concedes that some of Mr Fowls' drawings were shared with Mr Robinson hence it is possible that these were the sketches he was referring to. Whilst Mr Fowls could not recall what was in this folder, the evidence from BWR that they had no record of these drawings does lend support to the folder not containing Mr Zacharias' drawings.
119. None of the other correspondence presented to me that pre-dates these proceedings has any suggestion of any drawings by Mr Zacharias. Significantly Mr Zacharias does not refer explicitly to his drawings in any of his correspondence with BWR in late 2018 when he was challenging who the inventors were. Mr Muir Wood suggests that Mr Zacharias was alluding to his drawings when he referred in this correspondence to "Background IP". This is a phrase that was included in the standard terms that were attached to Bang Creations' letter of engagement with Mr Zacharias. These terms provide that any intellectual property held by Mr Zacharias and Mr Fowls before the agreement with Bang Creations remains the property of Mr Zacharias and Mr Fowls. This is referred to in the terms as "Background IP". The terms further specify that any intellectual property created or developed by Bang Creations because of the agreement will be "assigned to the client". This is referred to as "Foreground IP".
120. During his oral evidence Mr Zacharias confirmed that he was indeed referring to his drawings when he mentioned "Background IP" in this correspondence. I am however not persuaded. Indeed reading the three letters that Mr Zacharias sent to BWR in this period, it is noticeable that he addresses the law on entitlement including referring to the "devisor of the invention" and "inventive concept" and it would have seemed much more natural to refer to his drawings explicitly once he had started to refer to inventive concept.
121. In one of the letters sent to BWR in December 2018, Mr Zacharias also refers to having to pay for the copy of the patent case file he received from BWR but again makes no mention that his drawings were missing from the material provided.
122. Further in his statement accompanying this reference Mr Zacharias notes that he has:
- "copies of the service agreements terms and conditions, miscellaneous email correspondence with confirmation of my first meetings with BWR and BC, copies of email correspondence confirming my continuous contribution in the development of the Fluxuator, I have an email dated 14 December 2016 requesting payment for the application referred to as

“your above new patent application for the Fluxuator device” and confirmation that the Patent application GB1621241.7 related to my invention the Fluxuator from Gareth Aston at BWR also I have copies of numerous emails addressed to me (Zach) with the “Subject Fluxuator” requesting me to review the application.”

123. Even though this statement was not produced with professional advice, I again find it surprising that Mr Zacharias did not refer to his drawings in the list of documents that he considered relevant to his claim that he was the inventor.
124. Hence in a range of correspondence relating to the very question of who the inventor of the invention was, Mr Zacharias makes no reference to his drawings. The first reference to these drawings that I can see is in Mr Zacharias’ witness statement dated 5th July and submitted on 8th July 2019.
125. For completeness I would observe that Mr Fowls also questioned the authenticity of Mr Zacharias’ drawings suggesting that they were done later than the dates given on the drawings and merely show things that he had come up with before. He notes for example that the first figure is dated 16th September 2014 which pre-dates any of his drawings. He suggests that Mr Zacharias, at least at that time, had no knowledge about “flux or the plumbing industry” and didn’t have “a clue about how the invention worked”. He notes that he had not seen any of these drawings during the period that the invention was being devised. Indeed, he goes on to suggest that these drawings were in fact produced by Mr Zacharias in 2019.
126. I must however treat this evidence with some caution given my concerns about Mr Fowls’ credibility as a witness. Mr Zacharias also notes that after Mr Fowls had first told him about his idea for the tool, he had carried out “in-depth research on all aspects of flux, fluxing and plumbing industry” and that he had spoken “at length” to several of the experienced plumbers he regularly subcontracted to do work for him.
127. He provides support for this claim in an article for “Heating and Ventilation Monthly” written in 2017 by Mr Fowls’ wife. In this she notes that after her husband had confided his idea to Mr Zacharias that:
- “Mr Zacharias immediately loved the idea and wanted to invest, even though he didn’t know a single thing about the plumbing industry.
- Mr Zacharias spent the next few months scouring the internet, speaking to various plumbers and conducting market research to educate himself on different fluxes and the plumbing industry”.
128. Hence, I am satisfied that at the dates given on the drawings Mr Zacharias did have some knowledge of plumbing and the use of flux.
129. A more credible challenge to the authenticity of the dates on the drawings was provided by Mr Bridge-Butler. He referred for example to the triangular diagram in the drawing shown below which is signed and dated by Mr

Zacharias on 31st October 2014 and which Mr Zacharias indicated was just the result of him sketching out some possible shapes for the Fluxuator head. Mr Fowls in his witness statement explained that he had come up with the triangular design in February 2015 after having discussed the possibility of registering the design of the Fluxuator. He indicated that he was considering other shapes of head that others might try to bring to market to circumvent their preferred shape of head.



130. When Mr Zacharias was presented with the statement in Mr Fowls evidence that it was he who actually came up with the idea of the triangular head in February 2015, Mr Zacharias was neither able to explain how nor why he had come up with the idea nor what advantages it might have.

131. This inability of Mr Zacharias to provide any background to how or why he produced this drawing or a consistent account regarding the annotations discussed above does in my view bring into question whether he produced these drawings when he claims. If he had produced them when he claims, then I find it most unlikely that he did not share them with BWR or Bang Creations. Mr Zacharias said he did however the weight of the evidence is clearly against him on this.

132. Hence weighing up all the evidence I believe that it is more likely than not that Mr Zacharias did not share these drawings as he claimed in 2015 with Mr Robinson or with Bang Creations.

133. I turn now to the second significant fact in dispute and that is whether Mr Zacharias contributed to the development of the invention alongside Bang Creations.

Mr Zacharias' contribution to the work of Bang Creations

134. The bulk of the development of the invention set out in the patent clearly occurred in the period from when Bang Creations was engaged by Mr Zacharias and Mr Fowls in early 2015 until the filing of the patent in December 2016. During this period the initial idea set out in Mr Fowls' drawings was developed into a marketable product. It was in this period that

the inner workings of the product, notably the way in which the brushes were mounted, and the flux channelled to the opening of cavity, were devised. The evolution of the design is clearly shown in the sequence of concept drawings produced by Bang Creations.

135. Mr Zacharias in his original witness statement contends that any part of the invention developed during this period that could be considered an inventive concept was the result of his work. He refers specifically to idea of having a centre piece which holds the base of each brush between the centre piece and the outer housing of the applicator head and that the base of each brush fits into a respective slot in a periphery of the centre piece. He goes on to argue that Bang Creations merely addressed certain “design aspects” and achieved an “ergonomic and functioning device”.

136. Mr Zacharias suggests that at the first meeting with Bang Creations he

“explained in detail my invention and the drawings I had prepared, including the problems I had already envisaged in relation to over fluxing and the solution of moving the flux dispensing holes to the front of the opening to address this. I also explained the channels I envisaged moving the flux from the flux holder along channels to the holes and so it came out at the front of the head as shown in my drawings”.

137. I have however concluded that these drawings were not shared with Bang Creations as claimed by Mr Zacharias.

138. In addition to this first meeting Mr Zacharias also claims to have had frequent discussions with Bang Creations. There is ample evidence to show that indeed it was he, rather than Mr Fowls, who was the contact person with Bang Creations. Mr Zacharias has provided copies of numerous emails between him and Mr Knox and Mr Davies of Bang Creations. These include emails showing him discussing the commercialisation of the product including for example how to ensure that they could secure market share for any flux refills for the product. However, what is lacking from these emails is anything that points to Mr Zacharias contributing in a technical sense to the invention in the patent. The only thing of a technical nature is where Mr Zacharias reminds Bang Creations to include the removable brush in the design. Mr Knox also refers to this noting that the “client”, which I took to be a reference to Mr Zacharias, asked for a small detachable brush to be included in the design. I have however concluded that this detachable brush is not one of the inventive concepts in the patent and even if it was, I am not entirely convinced that Mr Zacharias was the deviser of this idea.

139. In terms of the inner workings of the invention, especially the mounting of the brushes using the centre piece and forming the channels there is nothing to suggest Mr Zacharias was involved in their design. As I have already mentioned when discussing Mr Zacharias’ credibility as a witness, Mr Zacharias’ inability to recognise what was shown in the patent drawings brings into serious question his claim that he collaborated inventively with Bang Creations throughout the prototyping stage. Indeed, the evidence

during cross examination revealed an almost complete lack of technical understanding of the features of the invention, except for the location of the apertures, that I have found to be at issue here.

140. Mr Zacharias has not provided in any of his evidence any background as to how the design evolved into the invention covered by the patent. In contrast Mr Knox has provided a convincing narrative to accompany the various concept drawings which does show how the invention was devised. He noted that the design of the centre piece with the slots to hold the brushes emerged late in the design process, around September 2015 and resulted from concerns about leakage of flux from behind the brushes. The mounting of the brushes in slots in the centre piece enabled the brushes to be pressed against the outer housing reducing the possibility of leakage. The design finally chosen was also less costly to manufacture and had fewer components than earlier concepts.
141. Mr Knox also provided more information on how the design of the channels to direct the flux flow evolved. He explained how the idea of forming the channel from the outer surface of the brushes and the inner surface of the housing had simplified manufacture. He also noted that the design of the channels, combined with making the housing transparent and having the flux dispensed through apertures at the end of the channel resulted in what he described as an “element of theatre” for the user when the flux was dispensed. When asked who had devised all these features, he said it was him and others at Bang Creations including Mr Davies. I would observe that the fact that the patent highlights another potential benefit of having the apertures at the front end of the channel does not undermine Mr Knox’s narrative. It is possible that this advantage became apparent after the design was complete or was otherwise identified. What matters is that Mr Knox’s account is believable whilst the opposing argument put forward by Mr Zacharias that he identified this advantage prior to the involvement of Bang Creations is not.
142. Mr Muir Wood argues that Mr Davies as one of the currently named inventors could have been a key witness who could have shed considerably more light on the various discussions he had had with Mr Zacharias during this period. Again, drawing on the principles in *Wisniewski* he argues that the absence of any evidence from Mr Davies means I should give more weight to the evidence of Mr Zacharias on the question of what was discussed between the two.
143. Mr Knox noted that Mr Davies had not given evidence again due to concerns about the added cost of this to the defendant. He further noted that at the time Mr Davies reported to him and that any work that Mr Davies did, including any drawings, had to be signed off by him. Hence despite not being a party to all the discussions that occurred between Mr Zacharias and Mr Davies, Mr Knox was he argued fully aware of how the invention was developing including whether Mr Zacharias had made any inventive inputs. And on that he maintains that all aspects of the claimed invention that were developed during this period were the work of him and Mr Davies.

144. Whilst it would have been helpful to have had direct evidence from Mr Davies, the reasons given as to why he did not provide evidence are not in my view unreasonable. I am also satisfied that Mr Knox was closely involved with the work of Mr Davies and, even if he had not been party to all the discussions between Mr Davies and Mr Zacharias, he would nevertheless still have had an appreciation of who was providing the inventive input. I therefore do not draw any adverse inference from the lack of direct evidence from Mr Davies. I must therefore give Mr Zacharias' evidence the weight it deserves devoid of any such inference. And that weight is not enough to outweigh the evidence given by the defendant, in particular Mr Knox, as to what if anything of an inventive nature did Mr Zacharias contribute during the period that Bang Creations was involved. Indeed, I believe that Mr Knox's evidence is compelling and shows that Mr Zacharias did not contribute to any of the inventive concepts in the patent.

Conclusion on who the inventors are

145. The inevitable conclusion of my findings in respect of the two key factual issues in dispute is that Mr Zacharias is not as he claims the inventor, or the co-inventor of the invention set out in granted patent GB2557647. Rather the currently named inventors, Mr Knox and Mr Davies are the actual devisors.

Entitlement to the invention

146. Having determined who the actual inventors are of the invention in the patent, I need to go on to determine whether their rights in the patent have been transferred to someone else. I can I believe be brief on that. Whilst Bang Creations entered into an agreement with Mr Fowls and Mr Zacharias, with the agreement of Mr Zacharias its client then became Dazcom. Mr Knox and Mr Davies then assigned their rights in the invention to Dazcom in assignment contracts that were each signed by Mr Zacharias as a shareholder of, and on behalf of Dazcom Ltd.

Summary and findings

147. Mr Zacharias has not established that he was the inventor or co-inventor of the invention set out in patent GB2557647. Rather I find that Mr Stefan Knox and Mr Theodore Davies are correctly named as co-inventors of the invention and that Dazcom Limited is correctly named as the sole proprietor of the patent.

Costs

148. It is long established practice that in proceedings before the comptroller only a contribution towards the successful party's costs should normally be awarded and that the amount should be guided by the comptroller's published scale unless the circumstances warrant departing from the published scale. My preliminary view is that there is no case to depart from the scale. Hence, I am minded to award the defendant the sum of £3400 as a contribution to its costs. This is made up of the following:

£400 for preparing a statement and considering the other side's statement

£1000 for preparing evidence and considering and commenting on the other side's evidence:

£2000 for preparing for and attending the hearing

149. I will however allow both sides to make submissions on the matter of costs within 5 weeks of the date of this decision if they so wish. If no submissions are made within that period, then the sum of £3400 should be paid by the claimant to the defendant.

Appeal

150. Any appeal must be lodged within 28 days after the date of this decision.

Phil Thorpe

Deputy Director
Acting for the Comptroller