

OPINION UNDER SECTION 74A

Patent	GB 2453569
Proprietor(s)	Radius Systems Limited
Exclusive Licensee	
Requester	National Grid Gas plc
Observer(s)	
Date Opinion issued	11 September 2014

The Request

1. The comptroller has been requested to issue an opinion under section 74A(1)(a) of the Patents Act 1977 as to whether GB2453569 (“the patent”) is infringed by the two types of Purge Tee assembly (“PT1” and “PT2”) described in the request and illustrated in Exhibit A, selected figures from which are reproduced in the Annex to this opinion.

Observations

2. Observations on behalf of the proprietor were received from Harrison Goddard Foote on 22 July 2014 and observations in reply were received from J D Reynolds & Co. Ltd. on behalf of the requester on 5 August 2014. Each of the request, the observations and the observations in reply made reference to [Opinion 24/12](#), an opinion on validity, previously issued in relation to this patent on 3 December 2012.

The Law

3. Section 60 Patents Act 1977 governs what constitutes infringement of a patent; Section 60(1) reads:

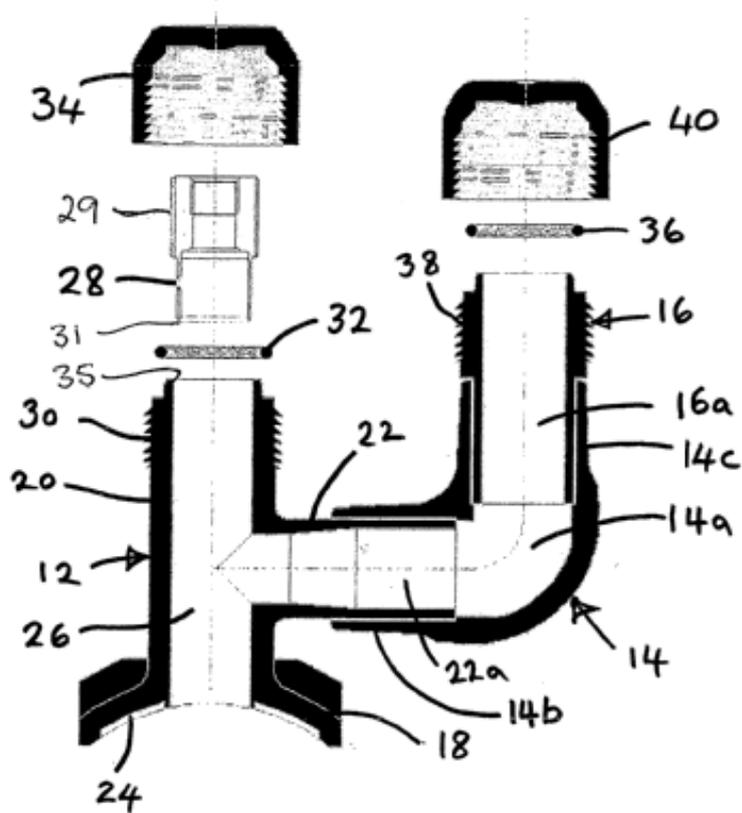
Subject to the provision of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he does any of the following things in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say -

(a) where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;
(b) where the invention is a process, he uses the process or he offers it for use in the United Kingdom when he knows, or it is obvious to a reasonable person in the circumstances, that its use there without the consent of the proprietor would be an infringement of the patent;
(c) where the invention is a process, he disposes of, offers to dispose of, uses or imports any product obtained directly by means of that process or keeps any such product whether for disposal or otherwise.

4. The requester has asked for an opinion as to whether the purge tee assemblies PT1 and PT2 infringe the patent (in other words whether they potentially infringe according to section 60(1)). In order to determine this I must first construe the claims (starting with claim 1 and moving on to the remaining claims if necessary - see paragraph 7 below) and then determine whether the products have the features of the claim so construed.

The Patent

5. The patent was filed on 11 October 2007, with no claim to an earlier priority date. It was granted on 25 April 2012 and remains in force.
6. The patent relates to a purge tee assembly for purging a plastics mains pipeline of air or natural gas. The general arrangement of the purge tee is shown in the figure below. The purge tee assembly 10 comprises a tapping tee 12 with a hollow body 20, a cutter 28 within the axial bore 26 of body 20, and a spigot formed of 22, 14 and 16 (shown as separate components in this figure, and described as "integral" in claim 1 as is evident below). In use the saddle 18 is placed on a plastics mains pipe and electrofusion element mat 24 is electrically energised, fusing the tee to the pipe. A screw threaded vent pipe is then attached to 16. After removal of screw cap 34, metal cutter 28 (which is at the top of bore 26) may then be advanced using an appropriate tool (a tee bar) down the bore and a small piece of the mains pipe cut out. The cutter with small piece of pipe (coupon 56a in Annex A figure 3c) retained within it is moved back up the bore 26. The tee bar is removed and screw cap 34 replaced. Purging of the mains pipe may then take place before cap 34 is again removed, the tee bar re-inserted and the cutter with coupon is then wound down back into the hole in the mains pipe created previously. Thus the cutter and coupon act like a valve blocking this hole. The vent pipe may then be removed, followed by removal of the tee bar and finally both screw caps 34 and 40 are secured over their respective external screw threads.



7. Given that all of the claims relate to the same inventive concept, I shall concentrate on claim 1, and will only consider infringement of the remaining claims if I find that claim 1 is indeed infringed by PT1 and/or PT2.
8. Claim 1 of the granted patent reads as follows:

*A purge tee assembly for purging a plastics mains pipeline comprising:
 a saddle, provided with a saddle-shaped saddle electrofusion element;
 a hollow body, integral with the saddle and provided with an axial bore and an externally screw threaded end distal to said saddle, said externally threaded end to receive a first screw cap;
 a cutter disposed within said axial bore and avancable and withdrawable therein to cut a hole in the mains pipe when the saddle is fitted thereto;
 a tubular spigot, which is integral with the hollow body and has a spigot bore in fluid connection with the axial bore of the body;
 characterised in that
 said spigot comprises an externally screw threaded distal outlet substantially parallel said axial bore of said hollow body and a second plastics screw cap screwable on the externally screw threaded distal outlet.*

Claim construction

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

10. Section 125(1) of the Act states that:

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

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

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

12. Both the requester and the proprietor have provided me with arguments relating to how claim 1 should be construed and in particular the intended meaning of “a tubular spigot, which is integral with the hollow body...said spigot comprises an externally screw threaded distal outlet...” (my emphasis), with there being disagreement over how “integral” should be construed, and in particular whether the construction I placed on this term in Opinion 24/12 was the correct one. I shall therefore consider this issue first before then considering the position of PT1 and PT2 with regards to infringement in terms of the requester’s further arguments; there being no arguments put forward by the proprietor other than with regard to the interpretation of “integral”.

13. The requester and the patent holder have not defined a person skilled in the art, although the requester has suggested that the “person skilled in the art would not perform the textual analysis ... of the Observations”, but “would have been concerned with the technicalities of construction, rather than how the products are sold”. This point does not constrain me in defining a person skilled in the art,

although I will return to it later (see paragraph 16), and thus I believe the appropriate person to be one skilled in the design and manufacture of tee assemblies for gas mains. This person would be familiar with metal and plastics manufacturing methods including moulding and installation methods including electrofusion, with these forming part of his common general knowledge.

14. The requester argues that “integral” in the context of this claim should be regarded as meaning “formed as a single component” whereas the proprietor argues that this construction, and my interpretation in Opinion 24/12, is incorrect as the “correct interpretation is that ‘integral’ means that the spigot and body are sold joined up as a single structure. This may be an integrally moulded structure ...or may be a multipart structure connected together”. The proprietor thus wishes to distinguish “integrally moulded” (moulded in one structure) and “integral”.
15. The requester seeks to draw my attention to the rather different construction of the term “integral” offered by the proprietor in responding to the request for an opinion (Opinion 24/12) on the validity of this patent. In its observations on that opinion, which related to the validity of the patent, it noted that the prior art device is “clearly not “integral with the hollow body”, there being at least two separate components (the valve unit and the elbow) therebetween”. This statement could be construed as being at odds with what it is now suggesting, however that earlier statement does not create any estoppel and the proprietor is free to argue something different now. The proprietor further contends that if it had intended to limit the claim as the requestor here suggests then it would have disclaimed embodiments failing to meet the “integrally moulded” definition. Alternatively it questions if the construction favoured by the requestor is correct, why did the examiner not require the application to be amended to exclude these embodiments falling outside of the claims?
16. As the proprietor notes, the patent includes references and figures which refer to a multi-component purge tee assembly. However, I disagree that I can thus necessarily infer that the claim is intended to encompass these situations. Instead I must concentrate on what the patent teaches the skilled worker about the word “integral”. The passage at page 3 lines 18-20 which states that “[w]hile manufacturing such a device might be problematic, there is no reason why the elbow needs to be a separate component and could otherwise be integral with the remainder of the purge tee” is to me most helpful here as it draws a distinction between “separate components” and “integral” which only appears to me to make sense if “integral” means manufactured as one single component. If I were to interpret “integral” to mean “sold joined up as a single structure” then it is hard to see how “manufacturing such a device” would be “problematic” and thus I find that I agree with the requester’s comments with regard to the skilled worker’s interest in “technicalities of construction” referred to in paragraph 14 above. Similarly the passage at page 6 lines 14-15 states “[t]he purge tee assembly of the present invention may comprise several individual components or comprise one single integral structure” and again this seems to me to provide no inducement to entertain the proprietor’s interpretation. Thus I conclude that the skilled worker would interpret “integral” to mean manufactured in one piece as is required in the various references to “integrally moulded” (e.g. at page 3 lines 34-37) and thus that I should construe “integral” as not only comprised of one single structure, but also manufactured as one single structure.

The Purge Tee Assemblies (PT1 and PT2)

17. The purge tee assemblies PT1 and PT2 are illustrated in the various figures in the Annex below. PT1 and PT2 are identical except for the final sealing fittings used (Figs 5(c) and 5(d) of the Annex). PT1 and PT2 both use a conventional tapping tee A (see fig.1) with a spigot B. In use, the tapping tee A is electrofused onto a mains pipe in the known manner for the purpose of venting/purging the mains pipe. In both PT1 and PT2, a mechanical elbow fitting C (black component, Fig. 2(a)-(c)) is used. The elbow fitting C has a lower end D for connection to spigot B and an upper end E that is used for venting/purging. The upper end E has an internal screw thread F (see Fig. 2(a)). In use, elbow fitting C is slid onto the spigot B of tapping tee A and secured using mechanical tightener/grip ring G. For both PT1 and PT2, a standard vent pipe (not shown in Annex figures) is used, which is provided with an external screw thread for connection to the female (internal) screw thread of a valve. The vent pipe is coupled to elbow fitting C via the valve by screwing the external screw thread of the valve into internal screw thread F on the upper (distal) end E of elbow fitting C. For each of PT1 and PT2, in use, the elbow fitting C is removed from spigot B following venting/purging. Then, spigot B is sealed using either a mechanical endcap L (fig.5(d)) or electrofusion endcap M (fig.5(c)) , for PT1 and PT2 respectively (PT1) or Fig. 7 (PT2). Mechanical endcap L has a mechanical tightener/grip ring and is used for temporary sealing of spigot B whereas endcap M is secured permanently by an electrofusion joint for permanent sealing of spigot B.

Do PT1 and PT2 fall within the scope of claim 1?

18. I must now decide whether purge tee assemblies PT1 and PT2 fall within the scope of claim 1 as I have chosen to construe it.
19. Claim 1 requires that the purge tee assembly includes “a tubular spigot, which is integral with the hollow body...said spigot comprises an externally screw threaded distal outlet...”. Both PT1 and PT2 feature what the requester describes as a conventional tapping tee. This tee has a spigot B onto which a mechanical elbow fitting C (black component, Fig. 2(a)-(c)) is attached. In use, elbow fitting C is slid onto the spigot B of tapping tee A and secured using mechanical tightener/grip ring G. Thus I conclude that PT1 and PT2 cannot be considered to have an integral spigot with the required properties of claim 1 as the elbow fitting C is both not made in one piece with the tee, but is also removable (and in use removed) by loosening the mechanical tightener/grip ring G.
20. The requester further argues that PT1 and PT2 do not possess either a spigot that “comprises an externally screw threaded distal outlet substantially parallel said axial bore of said hollow body” or “a second plastics screw cap screwable on the externally screw threaded distal outlet”. I agree with both of these points. The mechanical elbow fitting C is clearly internally threaded rather than externally threaded and, whilst PT1 and PT2 are both closed with endcaps, these endcaps are attached to spigot B not to elbow fitting C and neither endcap is screwed in place. Instead they are mechanically tightened or electrofused respectively. Thus it is my view that both PT1 and PT2 lack these features of claim 1.

21. Accordingly, for these reasons, I am able to conclude that purge tee assemblies PT1 and PT2 are both distinguished from claim 1, and by extension all of the claims (notwithstanding the clarity issues noted in Opinion 24/12), of the patent.

Conclusion

22. I conclude that purge tee assemblies PT1 and PT2 fall outside the scope of the claims of the patent and therefore these assemblies as defined by the requester do not infringe the patent under Section 60(1) of the Patents Act 1977.

Application for review

23. Under section 74B and rule 98, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

Dr Simon Grand
Examiner

NOTE

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

Annex

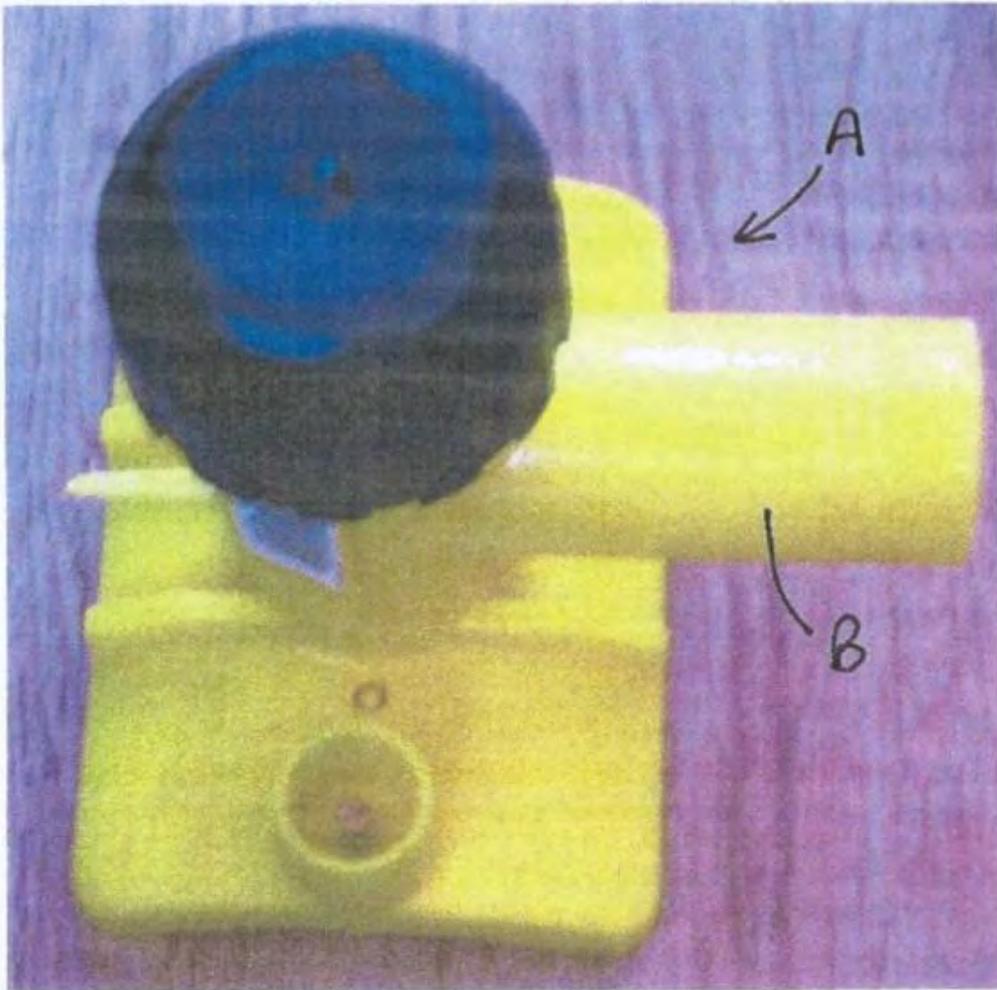


Fig. 1

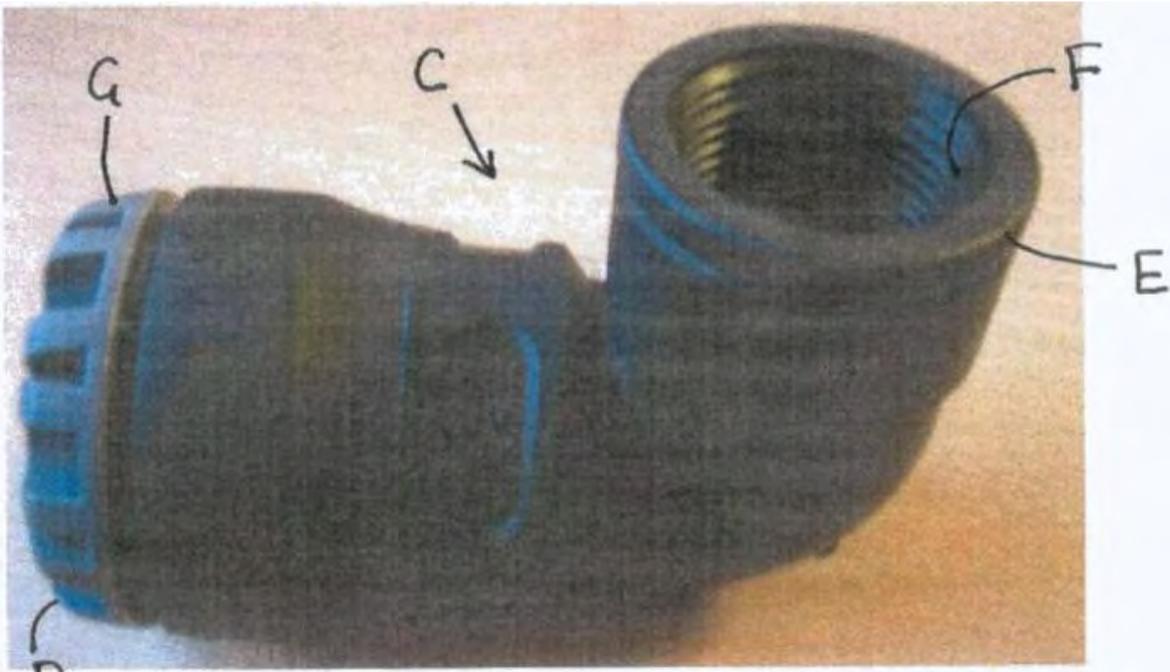


FIG. 2(a)

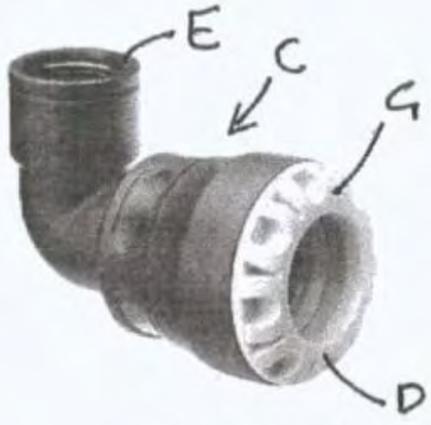


FIG. 2(b)

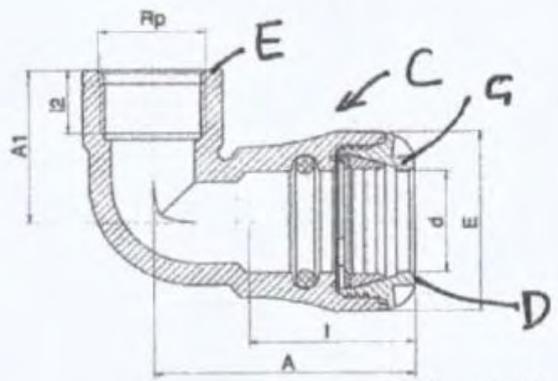


FIG. 2(c)

Fittings used

- EF Top Tees A

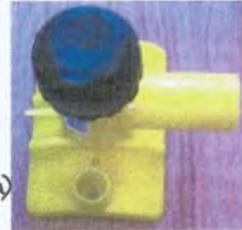


Fig. 5(a)

- Mechanical Elbow Fitting C



Fig. 5(b)

- Endcap – mechanical L (PT1) or EF M (PT2)



Fig. 5(c) M



L Fig. 5(d)