

he did not know how to amend his application. He enclosed a book on intellectual property referring to page 101 and paragraph 2 and also a letter dated 12th June 2004 from a patent agent in which they advised the Applicant that the application did not enclose enough detail to amend and that they could see little or no prospect of prosecuting this application to grant.

- 6 A second examination report was issued on 16th July 2004, in which the examiner re-stated the objection under novelty and offered a hearing.
- 7 In a telephone conversation with Deputy Director Mr Mc Munn on 16th September 2004, the Applicant confirmed that he wished to be heard. An Official Letter issued on 1st October 2004 by examiner Dr Corden, outlining the issues on which the hearing would be based, namely Sections 1(1)(a) & 1(1)(b) of the Patents Act 1977.
- 8 Following a lengthy exchange of correspondence and telephone calls between Litigation Section at the Patent Office, the Examiner (Dr Corden), the Applicant and the Applicant's wife, Mrs Thomson, a hearing date was directed for 11th July 2005. The Applicant was not able to attend the hearing in person or represent himself by telephone or video conference facilities because of ongoing health problems. He was however represented by his wife Mrs Thomson and a hearing was held on 11th July 2005 by telephone conference.

The Application

- 9 The application concerns toilet tissue in the form of a toilet roll or flat pack, the sheets of which have been chemically treated to detect the presence of occult blood in faeces. However, the application is very lean in technical detail comprising only four lines of description, seven claims which are not in acceptable format since they do not define the essential technical features of the invention (and because of this I have not repeated them here) and two figures – one showing a detection toilet roll and the other a chemically treated single leaf sheet. An abstract was also filed.

Objections raised by the case examiner(s)

- 10 Since the claims of the application do not define the invention, the examiner(s) identified on the basis of the application as filed, the following two possible inventions: (i) toilet paper/sheets impregnated with a chemical reagent which detects occult blood in faeces for diagnostic purposes, which the examiner found to be lacking in novelty and (ii) a flat pack of presumably separate tissues/sheets, the sheets of which are impregnated with a chemical reagent for detecting occult blood in faeces, with the tissues/sheets being separated by cellophane separation sheets, which the examiner found to be novel but lacking in inventive step. I agree with the examiner's identification of these two possible inventions.
- 11 The examiner (Mr Wendt) who carried out both search and examination of the application, objected that the invention when defined according to (i) in paragraph 10 above, was not patentable by virtue of Section 1(1)(a) of the Patents Act 1977, that is to say, the invention lacked novelty. He cited four documents: D1: GB1018563 (Wilkinson); D2: JP 10313894 A (Daiki); D3: JP 4311398 A (Daiki); D4: JP4203966 A (Yuuken), pointing out that Wilkinson in particular, clearly and unambiguously appeared to disclose the Applicant's invention.

- 12 Examiner Dr Corden, who took over the case following Mr Wendt's retirement, upheld the novelty objection made by Mr Wendt and cited 3 further documents: D5: EP0239265 A (Smithkline); D6: US4808379 (Wardlaw); D7: EP0193115 (Levine) to provide further evidence that sheets to detect occult blood in faeces is well known. In addition, he objected that when the invention was defined according to (ii) in paragraph 10 above, it was novel but not patentable by virtue of Section 1(1)(b) of the Patents Act 1977, that is to say, this aspect of the invention lacked inventive step, with this feature being obvious per se and obvious also in light of documents D6 and D7.

The Law

- 13 The issues to be decided are therefore (i) whether the perceived invention is novel/new, as required by Section 1(1)(a) of the Patents Act 1977 and (ii) whether the perceived invention involves an inventive step, as required by Section 1(1)(b) of the Patents Act 1977.

What constitutes a patentable invention is defined in Section 1 and the relevant part of this section reads as follows:

Section 1(1):

A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –

- (a) the invention is new;
- (b) it involves an inventive step;
- (c)
- (d)

and references in this Act to a patentable invention shall be construed accordingly.

Novelty

The novelty of an invention is defined in **Section 2(1)** of the Patents Act 1977 as:

“An invention shall be taken to be new if it does not form part of the state of the art.”

What constitutes the “state of the art” referred to in Section 2(1) is defined in **Section 2(2)** of the Act as:

“The state of the art in the case of an invention shall be taken to comprise all matter (whether a product, a process, information about either, or anything else) which has at any time before the priority date of that invention been made available to the public (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way.”

Inventive Step

What constitutes an inventive step is defined in **Section 3** of the Patents Act 1977 as:

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

Arguments and Assessment

(i) Novelty

- 14 In view of the Applicant being an unrepresented applicant, the examiner opened the hearing by restating the outstanding novelty objection, bringing Wilkinson patent (D1: GB 1018563), in particular, to Mrs Thomson’s attention. He explained that the Wilkinson patent in particular shows a toilet roll or sheets impregnated with one or more reagents, with one of the specific examples showing the detection of faecal occult blood in faeces. The examiner stated this was the same as the Applicant’s invention, when perceived to be a toilet roll impregnated with a reagent which detects occult blood in faeces for diagnostic purposes. He pointed out that several other documents presented to the Applicant also show toilet tissue, sheets or rolls impregnated with chemical reagents to detect occult blood in faeces.
- 15 In reply, Mrs Thomson commented that Wilkinson was trying to detect “all different ailments” with his invention. She explained that the difference between Wilkinson’s invention and that of the Applicant was in the use and made it clear on several occasions that the Applicant’s invention was a “screening aid for the detection of bowel cancer”. Mrs Thomson continued to explain that this is different to what is on the market today – the Applicant’s invention is more acceptable to the general public because it is natural to use a toilet roll. The idea and the concept of this is to help mankind, particularly the elderly, detect bowel cancer easily, acceptably and cost-effectively, with the toilet roll being absolutely normal and acceptable – a friendly solution.
- 16 The examiner restated the objection, pointing out that the Wilkinson patent and other documents already suggest the Applicant’s invention.
- 17 Further in reply, Mrs Thomson pointed out that Wilkinson is “highly technical” with him trying to detect all types of ailments, restating that the Applicant’s invention was simply a screening aid for bowel cancer, which is cost effective and better than what is on the market today.
- 18 At this point, the examiner directed attention to the Applicant’s patent application as filed, pointing out that the application was not specific to bowel cancer and what needed to be considered was the contents of the application, which is a toilet roll, the sheets of which are impregnated with a chemical reagent to detect the presence of occult blood in faeces and acknowledged that this concept is well known.
- 19 Taking on board both the examiner and Mrs Thomson’s observations, I will now consider the issue afresh. Considering Wilkinson (D1: GB 1018563) first, this document discloses a diagnostic aid in the form of a toilet paper impregnated with at least one reagent which is capable

of undergoing for example, a colour change, in response to detecting one or more substances of pathological origin contained in human or animal excrement. In particular, Wilkinson defines on page 1 lines 29-31 "toilet paper" to mean "the paper commonly used in latrines, whether in the form of rolls or separate sheets." It is further indicated on page 1 lines 50-52 that "each perforated sheet of a normal toilet roll may be impregnated with one or more reagents." The diagnostic toilet paper of this document can be used to test urine for albumin, galactose, glucose, bile, acidic urine, alkaline urine acetone as well as occult blood in faeces (as recorded in the table on page 2 of this document) depending of course on the nature of the chemicals impregnated in the toilet paper. Ultimately, this document acknowledges in Example 6 headed "Indicator for detection of blood in body fluids/excreta" on page 6 lines 35-73 that occult blood in faeces can be indicative of "gastric or intestinal lesions such as ulcers or malignant growths on the stomach, duodenum, large or small intestine."

- 20 It is clear to me having read the Wilkinson document, that it is on all fours with the Applicant's invention. Wilkinson teaches a way of detecting occult blood in faeces, by use of toilet paper, having sheets impregnated with chemicals, which act as indicators when occult blood is presented on the paper, with occult blood in faeces recognised as being an indicator for "malignant growths on the large or small intestine", ie. bowel cancer.
- 21 At the hearing, Mrs Thomson made it clear that the Applicant's invention resides in a "new concept – a screening aid for bowel cancer, with occult blood in faeces, (recognised as an indicator for bowel cancer) being detected through use of toilet paper impregnated with chemical reagents.
- 22 For the purpose of explaining the concept of novelty to Mrs Thomson at the hearing, the "toilet roll having sheets impregnated with chemicals" was defined as a "machine". Using this to compare Wilkinson & the Applicant's invention, it is clear that both use the same "machine" ie toilet paper (or separate sheets) having sheets impregnated with chemicals, to detect the same thing ie. the presence of occult blood in faeces, as a means for indicating the possible presence of malignant tumors in large or small intestine ie. as a screening aid for bowel cancer.
- 23 Whilst I recognise Mrs Thomson's observations that the Applicant's product may not currently be on the market, may be cost-effective to manufacture, is simple to use, especially for the elderly and is in the public interest, I cannot overlook the fact that the Applicant's invention is not new (not novel) having regard to the Wilkinson document. I find therefore, that the Applicant's patent application, on the basis of the Wilkinson document alone, lacks novelty.
- 24 I will now turn my attention to the other patents, namely D2 through to D7, which the case examiner(s) brought to the Applicant's attention during the search and examination stages.
- 25 I find, likewise with the examiners, that these documents demonstrate that it is known to use either toilet paper or sheets, impregnated with chemicals to detect the presence of occult blood in faeces, which clearly show that the Applicant's invention is not new. In the case of the Japanese documents, I have taken into consideration the English abstracts.
- 26 I am in no doubt from the selection of documents cited by the case examiner(s) that the concept of detecting faecal occult blood in this manner is extremely well know irrespective of whether the

faecal sample is collected via tissue from a toilet roll or indeed via separate tissue sheets. I am in no doubt also, on the basis of Wilkinson and also through my own general knowledge, that faecal occult blood is an indicator of possible bowel cancer.

27 I have also considered the letter the Applicant received from patent agent (dated 29th June 2004). I note their comments that the Wilkinson document and the Japanese abstracts disclose the basic concept behind the Applicant's idea and their comments regarding the lack of technical detail present in the Applicant's patent application. I have also considered page 101 and paragraph 2 of the book on intellectual property referred to by the Applicant in his letter dated 12th July 2004. I agree with the examiner Mr Wendt that this is not relevant.

28 I uphold the examiner's objection and find therefore, that the Applicant's patent application, when the invention is taken to reside in toilet paper/sheets which are impregnated with chemicals to allow detection of faecal occult blood for diagnostic purposes does not fulfill the requirements of novelty, required by Section 1(1)(a) of the Patents Act 1977.

(ii) Inventive Step

29 At the hearing, I explained that it was necessary for the examiner to consider all technical features disclosed in the Applicant's patent application as filed, to determine whether there was anything disclosed therein which could be patentable and that this part of the hearing was aimed at considering the inventiveness of providing a flat pack of presumably separate tissues/sheets, impregnated with a chemical reagent for detecting occult blood in faeces, with the tissues/sheets being separated by "cellophane separation sheets", which is disclosed, albeit in not very much detail, in the application.

30 The examiner introduced a "person skilled in the art" to be a work man or technician who is aware of the prior art and has the skill to carry out routine tasks but is not able to "think on his feet" so to speak. He pointed out that in Wilkinson, the means to detect faecal occult blood can be a toilet roll or separate sheets (impregnated with chemicals for the purpose). On the basis of Wilkinson alone, the examiner considered that a skilled man would not exercise inventive skill by placing separating sheets between the chemically impregnated sheets, since it is generally recognised practice to place separation sheets between sheets to, for example, minimise contamination or to prevent adjacent sheets from sticking together. Notwithstanding this, the examiner referred to documents D6 and D7, which disclose sheets or toilet rolls, the sheets of which are impregnated with chemical reagents, to detect faecal occult blood, and which demonstrate that toilet tissues that are in flat packs can have either a polythene backing on the tissue or a cover sheet on the tissue/sheet to prevent contamination between adjacent sheets. With this knowledge, the examiner expressed that a skilled person would be guided towards using plastic sheets to separate adjacent chemically impregnated sheets and concluded that this aspect of the invention also lacked inventive step. Mrs Thomson gave no specific reply to this objection.

31 Given that the claims filed by the Applicant do not define the invention in terms of its technical features, I have also looked carefully through the application for any other concept which could merit the granting of a patent. Likewise with the examiner, the only other concept which I could identify was that of a "flat pack" (as opposed to a toilet roll), with the sheets being impregnated

with chemical reagents to detect faecal occult blood but with these sheets being separated by cellophane separation sheets. This form of the detection aid was brought to the Applicant's attention in the Official Letter dated 1st October 2004.

- 32 I have re-considered carefully the patent documents brought to the Applicant's attention by the examiner(s) and I am satisfied that none of them actually disclose chemically impregnated sheets separated by cellophane separation sheets and to this extent, the invention when construed in this way is novel. However, I must consider whether providing separation sheets between the chemically impregnated sheets does indeed demonstrate a degree of inventiveness.
- 33 I agree with the examiner that on the basis of the Wilkinson document, it is clear the diagnostic toilet paper can be in the form of separate sheets. I appreciate that it is acceptable practice to insert plastic separation sheets between adjacent sheets in a flat pack and on this alone, I believe there to be no invention in a flat pack, the diagnostic sheets of which are separated by cellophane separation sheets, with a cellophane sheet itself being nothing more than a plastic sheet.
- 34 In addition, I agree with the examiner that documents D6 and D7 show the use of plastic/polymer sheets on the diagnostic tissue to prevent transfer of chemical reagent from one sheet to another. On the basis of these documents therefore, I believe that the use of cellophane separation sheets to separate sheets in the flat pack would not require a degree of inventiveness.
- 35 I uphold the examiner's objection and find therefore, that the Applicant's patent application when the invention is defined as a flat pack (presumably separate tissues/sheets), the sheets of which are impregnated with a chemical reagent for detecting occult blood in faeces, with the tissues/sheets being separated by cellophane separation sheets, is novel and therefore fulfils the requirement of Section 1(1)(a) but in fact does not fulfill the requirements of Inventive Step, required by Section 1(1)(b) of the Patents Act 1977.

(iii) Saving Amendments:

- 36 At the hearing, I asked the examiner whether the patent application contained any features for which a patent could be granted, based on the patent application as originally filed. The examiner expressed that given the lack of detail within the application, there did not appear to him to be any way of amending, which would lead to a grantable patent. I have also looked carefully through the application as filed for technical features which might form the basis of a patentable invention but I have not been able to find anything further.

Other Matters

- 37 The hearing itself was complicated not only by the fact that Mrs Thomson is a representative of the Applicant who, himself is an unrepresented applicant but she did not have copies of the patent application, citations or correspondence to hand, which made it impossible to refer to texts in relevant documents. Prior to closing the proceedings, I asked Mrs Thomson whether she had any more questions or points to raise. She commented that she had been able to put the Applicant's points over – that it was a new concept of a screening aid for bowel cancer, it is in the public interest with its use being acceptable to the public, it could be easily manufactured because of its simplicity, it has never been used before, it is not on the market and it is bound to be marketable and it is cost effective. I must observe that I do not think that the Applicant has

been disadvantaged by holding the hearing via telephone conference.

- 38 Mrs Thomson made reference during the hearing to the original abstract “going missing”. I explained about abstracts being “search tools” which are amended by examiners and that was the reason why the abstract on the published patent application GB 2382649 differed to that originally filed by the Applicant. I reassured Mrs Thomson that the original abstract was still on file.
- 39 Mrs Thomson queried the age of the Wilkinson patent (published 1964) and was confused over a “twenty year issue”. I explained that a patent could be granted for up to a maximum of twenty years after which time, the technology protected by the patent becomes available for others to use. I explained also that the prior art against which an invention is judged consists of everything which is in the public domain prior to the earliest date of the patent application.

Conclusion

- 40 In summary, I find that the application does not disclose an invention for which a patent can be granted. I am satisfied that the inventions when defined as in (i) and (ii) of paragraph 10 above, lack novelty or inventive step and I can find nothing in the description that might support a patentable claim. I therefore refuse the application under Section 18(3).

Appeal

- 41 Under the Practice direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days. It should be noted that the hearing was held some time after the deadline specified under rule 34 for putting the application in order, but before the extended deadline available as of right under rule 110(3). At the time of the hearing, a request to extend the rule 34 period under rule 110(3) had not been filed but this can be done retrospectively up to 13th August 2005.

CL Davies

Deputy Director, acting for the Comptroller