

PATENTS ACT 1977

IN THE MATTER OF

Application No. 9518702.7

in the name of Cyril Reginald Benton

DECISION

Introduction

1. This application was filed on 13 September 1995 in the name of Mr Cyril Reginald Benton and relates to a safety razor with an angled head. It takes priority from an earlier application GB9420982.2 and was published on 24 April 1996 as GB2294229.

Claim 1 of the application as originally filed read as follows:

“A safety razor of the type comprising an elongate handle and elongate blade held in a blade holder which extends in a direction transverse to the longitudinal axis of said handle, wherein the blade and the handle are so disposed that their general axes lie at an angle between 1E and 30E from a perpendicular direction.”

2. The preliminary examination report under section 17 was issued on 21 November 1995 and cited three documents against claims 1-6, four documents against claims 1-7, and one document against claims 1-3 and 5 and 6. All documents were cited under category X, viz. indicating lack of novelty or inventive step.

3. The first examination report under section 18(3) was issued on 14 October 1997. The report concentrated on the issue of novelty and cited the 8 documents that were originally cited under section 17 together with a document cited against the equivalent published PCT application (WO 96/11777) against claims 1-7. In the opinion of the examiner, the feature of claim 1 relating

to a range of angles of the razor head to the razor handle was considered to be disclosed in each document. Several documents disclosing heads being angularly adjustable arguably encompassed the range of angles referred to in the main claim. In addition, other documents disclosed razors in which the angle was clearly within the claimed range. The features within appendant claims 2-6 were also considered to be anticipated by the prior art.

4. Amendments were filed by the applicant's agent on 14 April 1998. Claim 1 was amended to incorporate the feature previously in original claim 4 which related to the handle including a bend such that the end of the handle connected with the blade holder (or head) substantially normally. While the feature relating to the bend at the end of the handle may have been intended to offer a distinguishing aspect to the razor it was nonetheless contested by the examiner in a further examination report issued on 15 May 1998 that such a feature was necessarily anticipated by the equivalent forms of attachment disclosed in the cited prior art. In addition, such a feature did not necessarily provide a technical advantage over other prior art devices.

5. Further amendments were filed on 16 September 1998 which included an annotated version of the drawing accompanying the specification to indicate the nature of the bend. Claim 1 was further amended to include a feature relating to the razor comprising a "unitary moulded fabrication". None of the cited prior art devices disclose such a unitary moulded construction and thus the examiner's objection to a lack of novelty was considered no longer valid. However, the inclusion of this feature was considered to be an obvious alternative modification to a safety razor since it is a generally accepted practice to manufacture razors from a single moulding of plastics and many such razors are currently available on the market.

6. A further examination report was issued on 4 November 1998 with the main objection being raised in respect of a lack of inventive step. The examiner considered that the feature relating to a unitary moulded construction was well known in the art and would be obvious for the type of razor proposed in the light of the cited documents. It was also considered that no technical advantage over the prior art razors was apparent for the feature of the handle meeting the head substantially normally and that this feature did not offer an inventive step.

7. Further amendments were filed on 4 January 1999. Claim 1 was amended to incorporate

the feature previously in the original claim 2 relating to a narrower range of angles (between 10E and 25E) between the head and the handle. Such a feature was not considered to alter the scope of the invention to any significant degree in terms of distinguishing the present razor from prior art devices. In this respect, the prior art razors necessarily show the angles between head and handle to be within this range and as the examiner had iterated previously, some examples of razors have adjustably angled heads to provide for a range of angles. Thus the previous objection to a lack of inventive step was pursued in a further examination report issued on 1 February 1999.

8. In addition, a further objection was raised concerning the feature relating to the unitary moulded construction of the razor. Upon reconsideration by the examiner this feature was felt not to be directed to the present invention *per se*. Instead, its inclusion in the description was considered merely part of the preamble outlining the general field of safety razors. In addition, the last paragraph on page 2 of the original description referred to the handle as being fixedly attached to the head or attached to allow variability in the angle between the two.

9. Further correspondence between the agent and the examiner failed to resolve the outstanding matters and consequently it came before me at a hearing on 30 March 1999. The applicant was represented by Mr T Gregory and Mr Young attended as examiner.

The Law

10. Section 3 reads:

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

The issues

11. The question of whether or not an invention is obvious to a skilled person in the art is normally decided on the technical facts of a particular case. Accordingly, in considering this application I have restricted myself to these facts. The present invention concerns a safety razor.

Safety razors are well known and generally take the form of a handle part and a head part joined perpendicularly to it at the top of the handle. The head part is generally furnished with one or more razor blades. In the past safety razors were made of metal. Nowadays they may be made of plastics to satisfy the market for disposable razors.

12. In the present device, the blade is arranged so that its edge is oblique to an axis normal to the handle axis. However, the preliminary search and examination under section 17 revealed that such arrangements are well known. As a consequence, the main claim was amended to include additional features which are not shown together in a single published document so as to render the main claim novel with regard to the cited prior documents.

Claim 1 as amended now reads:

“A safety razor of the type comprising an elongate cutting blade and a unitary moulded fabrication including an elongate handle and an elongate blade holder which extends in a direction transverse to the general longitudinal axis of said handle, wherein the handle is bent through an angle of between 10° and 25° so that it connects with the blade holder substantially normally but its general axis is oblique to the longitudinal axes of the blade and blade holder.”

13. At the hearing Mr Gregory introduced a safety razor alleged to embody the invention which he subsequently confirmed as being of “one-piece construction”. He stated that the razor exhibited three features. The main one was that the razor was “angled to help in the cutting action”. Also, the razor was “of the disposable type” and that “the handle is bent rather than being mounted to a straight angle”. I noted that he was prepared to amend the application to reflect that the entire razor was of a “moulded plastics fabrication” and so remove the reference to “unitary moulded fabrication” to meet an outstanding official objection.

14. The application as filed actually addresses the problem of the dragging action of prior art safety razors. It acknowledges that an angled cut may be more effective and refers outside of the razor art to guillotines used for severing heads to provide the solution to the problem. Much is made of the angle α of the blade with respect to the perpendicular to the general direction of the

handle. The application states that “At angles α of less than 10° no appreciable benefit has been obtained, and at angles α greater than 30° the benefits are outweighed by the danger of skin irritation.” The cited documents show that it is well known for a safety razor to have a handle with a blade holder attached to it and extending transversely such that the axis of the blade or blade holder is between 10° and 25° to the axis of the handle.

15. Focussing now on the feature relating to the handle being bent so that the handle connects with the blade holder normally rather than at some other angle, the examiner had considered that this feature was trivial and amounted to no more than a minor modification to enable the claimed invention to demonstrate novelty. The examiner had opined that the bend did not truly feature, to any distinction, in the drawing accompanying the specification. In fact it could be said that for the case where the angle is approaching 10° the bend would be imperceptibly small, and indeed I consider such to be the case, as demonstrated in the drawing as originally filed.

16. Mr Gregory has justified the bent handle feature by asserting that the leading edge of the razor of GB2179286 was very close to the handle which makes it difficult to use. Bending the handle means that the leading edge is kept further from the handle and gives greater accuracy of use. According to Mr Gregory this was an unexpected way of arranging things. The feature provided an angle of attack (or dragging angle) nearer to the trailing edge of the blade holder or in line with it. (This was demonstrated by continuing the general axis of the handle through the blade holder. Whereas in the prior art the extended axis bisected the blade holder centrally, with the razor of the invention the extended axis intersected the blade holder towards its trailing edge and thus provided a displacement). This in turn provided clearance for the leading edge of the blade holder. He considered it was an unexpected way of obtaining a better result.

17. It is clear from a study of the prior art as exemplified by the cited documents that various known razors (eg GB350829, US4083103 at least) show an end part of a handle connecting normally to a blade holder while others (eg GB628331, GB208583) merely form a joint between handle and blade holder with no angular change to the handle end. However, the differences between such joints is not considered to be significant *per se*.

18. Mr Gregory, however, has dismissed the relevance of GB350829, which shows a bend

which displaces the leading edge of the blade holder as in the invention, since it was multi-piece and not the sort of razor which is meant to be disposable. Also, the handle was not bent but it was constructed with a bend. He posited that there was a “fair leap” from this razor to the present invention, viz. a single-piece moulding with a bent handle. He added that the razor of the invention had an improved result, although the application did not say so, and that one might say that “the feature was a lucky accident when the original razor was designed”.

19. Apart from the statement of the invention on page 2 of the amended application, the only reference to a bend in the handle of the razor is at page 3 describing an embodiment of the invention. The description states that “the handle 3 is bent in a region adjacent the blade holder 2 such that the two meet and are joined at an angle which is substantially perpendicular. In this case, the handle is bent with respect to the general direction of the handle 3, as indicated by arrow A, at such an angle to the joining portion and therefore the general direction of the blade that the blades 1 or the blade holder 2 is angled by angle α to the perpendicular to the general direction by arrow A.” There is no indication that the feature of a bent handle solves a problem or is a distinguishing feature of the invention over the prior art.

20. Turning to the disposable feature of the invention, the examiner had considered that the razor being of "unitary moulded fabrication" was not inventive since it is very common practice to construct a razor from a unitary moulding. Indeed, this fact is mentioned at paragraph 1 on page 2 of the agent's letter dated 15 March 1999 and was accepted by the agent at the hearing when he made reference to the technology having been well known for 20 years.

21. According to Mr Gregory's evidence at the hearing it would appear that a significant aspect of the present invention relates to the method of fabrication of a safety razor. In this respect, it is noted at paragraph 3 of the agent's letter dated 14 September 1998 and what was implied by Mr Gregory at the hearing that it is intended to fabricate the razors of the invention by bending a conventionally fixed handle rather than altering the method of fixing for razors of unitary moulded fabrication. However, there is no disclosure in the original application which alludes to this method of manufacture or indeed that the bend present in original claim 4 results from a bending process rather than, say, during a moulding process. The application merely stands to be interpreted as a razor handle being provided with a bend adjacent the blade holder.

Mr Gregory posited that a “bending step” was alluded to in the application, although he accepted that the application was silent as to how to carry it out. However, he added that a person skilled in the art would know how to effect such a bend.

Conclusion

22. In my opinion, from a reading of the application, what we have is a safety razor of a moulded plastics fabrication with an obliquely mounted blade holder and a bent handle which also forms the joint between the handle and the blade holder. It is not disputed that all of these features are known in the prior art for razors. For example, GB350829 discloses a razor having a bent handle/joint with the leading edge of the adjustable blade holder displaced away from the general axis of the handle. US5093991 discloses a razor with an adjustable head. All the parts of the razor other than the cutting blades are formed by moulding organic plastic material; the handle and mounting boss for the head are preferably unitarily moulded. US 4128937 discloses a razor of moulded plastics fabrication with a fixed blade holder with an oblique cutting angle of between 15E and 20E. Although we do not have a single disclosure of all the three features in a single document, the teachings are readily available for the skilled addressee.

23. It is also not disputed that a skilled person would know how to produce a bend in the handle of a plastics safety razor. However, it is precisely this point that is of concern since the intention of current patent legislation is not to inhibit the rights of a skilled person in the art from carrying out what appears to be a routine modification of a known safety razor: It would be wrong to prevent such a skilled person from doing something, in this case moulding a razor out of plastics with a bend at the junction of the handle and head portions, which is merely an obvious extension of what is known in the razor art before the priority date of the present application. The whole thrust of the application is to provide a razor with an angled blade to obviate the dragging effect whilst shaving so as to provide the user with a less painful and more effective shave. The application realises that an angled cut may be more effective even when a blade is less than perfectly sharp. It has also states that use of the angled blade may provide up to 20 shaves compared to existing razors which may last only 4 to 7 shaves.

24. Although the invention as claimed is novel, I consider that a skilled person would have combined together the readily available teachings of the prior art for safety razors. On the balance

of the evidence available to me I do not consider the use of a plastics moulded fabrication inventive for a safety razor. Nor do I consider that the provision of a bend at the top of the razor handle is inventive; it would appear to be merely one option available to a skilled addressee for providing the angled head and hence the angled cut which purports to be the object of the application.

25. In my opinion, therefore, I believe that immediately prior to the priority date of the application the alleged inventive step of providing a bend in a razor of moulded plastics fabrication would have been obvious to a skilled addressee.

26. I have considered whether there is disclosure in the application which could support a main claim which would not contravene section 3. However, there do not appear to be any saving amendments to the outstanding objection that the application lacks an inventive step. Accordingly, I therefore refuse the application GB9518702.7

Appeal

27. This being a substantive matter, any appeal from this decision must be lodged within six weeks of the date of this decision.

Dated this 7th day of April 1999

D J JERREAT

Deputy Director, acting for the Comptroller

PATENT OFFICE