



PATENTS ACT 1977

APPLICANT	Taha Mirshahi et al
ISSUE	Inventive step
HEARING OFFICER	Peter Mason

DECISION

Introduction

- 1 This decision concerns patent application GB 1713506.2 entitled “Protective glass powder shaker” in the name of Mirshahi et al, and primarily whether the invention, as defined by the claims, comprises an inventive step as required by section 1(1)(b) of the Patents Act 1977 (herein after the “Act”). The application was filed on 23 August 2017 and was published on 27 February 2019.
- 2 In their examination report dated 24 November 2020 the examiner presented their view the independent claims did not involve the inventive step required by section 1(1)(b) of the Act, in respect to cited prior art documents. In a letter accompanying this examination report the applicant was invited to request a hearing on the matter.
- 3 No amendments have been offered since the exam report dated 24 November 2020, and the applicant has been unable to convince the examiner that the claims are inventive. At this impasse, the applicant has accepted the examiner’s invitation to refer the application to a hearing officer.
- 4 The hearing took place on 1 June 2022 where the inventor, Shahla Mirshahi was accompanied by her daughter, and co-applicant, Taha Mirshahi.

Preliminary matters

- 5 The only substantive matter before me is whether the invention involves an inventive step with respect to the cited prior art. At this time the search is up to date for both s.2(2) and s.2(3) art and therefore, if I find that the claimed invention comprises an inventive step with respect to the prior art, I will return the application to the examiner to begin preparations for grant. However, the compliance period expired 23 February 2022 and there is no opportunity for extension. Therefore, if I find the claims to be disallowed there is no recourse for the application.

The invention

6 The application relates to a glass powder shaker that is used in glass art, where a shaker is used to spread different grades of glass powder over a base to create a design which is then fired in a kiln. Typically, the user would sieve the glass powder and the inventor has identified that when a finer grade of powder is used the higher the quantity of glass powder that is able to float freely in the air which may be inhaled by the user. Glass powder, if inhaled, is understood to be harmful therefore the invention attempts to prevent the glass powder becoming airborne in order to mitigate illness caused by inhalation.

7 The claims have been amended since filing and are now presented, as filed on 12 August 2019. There is a single independent claim and three dependent claims. Claim 1 reads;

1. A Protective Glass Powder Shaker comprises of a Body with an Extended Lower Wall forming an open base under a layer of Mesh inside the body, a Lid which is attached to the upper part of the Body by a hinge and a Holding Rod.

8 It is not necessary for me to consider the dependent claims in light of the expired compliance period.

The law - Inventive step

9 Section 1(1) of the Act sets out the requirements which need to be met for a patent to be granted:

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) is capable of industrial application;

(d) the grant of a patent for it is not excluded by subsections (2) and (3) or section 4A below;

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

10 Section 3 of the Act sets out how inventive step is determined:

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 state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

11 Matter which “forms part of the state of the art by virtue only of section 2(2)” is all matter which was made available to the public before the priority date of the application in question. In this case all matter published before 23 August 2017.

- 12 Special consideration is required when the invention may be to a combination of discrete aspects, often referred to as a collocation. In *SABAF v MFI*¹, Lord Hoffman held that;

But before you can apply s.3 and ask whether the invention involves an inventive step, you first have to decide what the invention is. In particular, you have to decide whether you are dealing with one invention or two or more inventions. Two inventions do not become one invention because they are included in the same hardware.

- 13 In the same judgement, Lord Hoffman quoted with approval passages from the EPO Guidelines for Substantive Examination, providing guidance on how to determine whether two features display synergy. This guidance was re-stated and further explained in the EPO Technical Board of Appeal decision in T 1054/05:

Two features interact synergistically if their functions are interrelated and lead to an additional effect that goes beyond the sum of the effects of each feature taken in isolation. It is not enough that the features solve the same technical problem or that their effects are of the same kind and add up to an increased but otherwise unchanged effect.

Arguments and analysis

- 14 The examiners argument finds basis in the prior art disclosures of US 4534858 A and US 2244186 A which both concern flour sifting, rather than sifting of glass powder or similar materials. However, the examiner asserts that a typical flour sifter is required to be able to sift particle sizes in the region of 212 µm which is approximate to the requirements of a glass sieve. Therefore, whilst not specifically relating to “*A Protective Glass Powder Shaker*”, as required by claim 1, the examiner concludes that flour sifters, and specifically those disclosed in US 4534858 A and US 2244186 A, would be suitable for shaking typical glass powder particles. The examiners analysis of each document is set out below;

US4534858 discloses a flour sifter comprising a mesh 27 within a body which has an extended lower wall 23 forming an open base. Column 3 lines 39-50 discloses that the extended lower wall serves as a baffle or guide for directing the flow of sifted flour - i.e. to prevent unwanted spreading. The sifter also has a single holding rod 30 which would allow use with one hand. It is noted that the handle is intended to be inserted into a conventional electric knife drive unit 40. However, the sifter could be used without the electric knife drive unit and would be suitable for glass powder shaking. This discloses all of the features of your claims except for the hinged lid of claim 1.

US2244186 discloses a hand-held flour sifter which has a hinged lid 12 at each end. Although a mechanism to promote flour sifting is present, this would not prevent the sifter from being used as a glass powder shaker by simply holding it and tapping with a spoon. Moreover, with the lower cover open, the sifter would have an extended lower wall forming an open base, and

¹ *SABAF SpA v MFI Furniture Centres Ltd* [2005] RPC 10

so differs from your claim 1 only in that it has a mug-type handle as opposed to a holding rod.

- 15 The examiner alleges that the claimed invention consists of, beyond having a layer of mesh within a body which is typical of any glass/flower sieve; an extended lower wall forming an open base, a hinged lid and a holding rod. The examiner acknowledges that these three features contribute towards an improved glass powder shaker but argues that each relates to a separate improvement having no impact on the other. The examiner accordingly concludes that claimed invention is a collocation of three distinct technical features.
- 16 Prior to the hearing I had considered the examiners arguments with respect to collocation and found it difficult not to attribute some association between the three components in question. Furthermore, during the hearing Taha Mirshahi was able to demonstrate that by arranging the holding rod in proximity to the hinged lid the user is able to open the lid with a thumb of the hand holding the holding rod; this permits the user to be able to refill the sieve, with the unused hand, without having to place the shaker down. This demonstrates a clear synergy between the lid, body and holding rod at least. Furthermore, it is clear to me that by providing a body having a mesh and an extended lower wall arranged below the mesh inevitably provides synergy by nature of the improved functionality relating to containing any airborne dust particles that exit the mesh. Therefore, in conclusion I find that the holding rod, hinged lid and extended lower wall interact directly, or indirectly, synergistically wherein the additional effect of their interrelationship goes beyond the effect of each feature taken in isolation.
- 17 The examiner does not provide any argument relating to the obviousness of the invention in relation to the prior art in regard to the common general knowledge, however when asked whether the prior art would be adapted by a skilled person to arrive at the invention Taha Mirshahi argued that US2244186 A would not be suitable for a glass powder shaker. Taha Mirshahi explained that if glass powders are allowed to contaminate one another during crafting the result is an unsightly finish after a workpiece is fired in a kiln. Taha Mirshahi further argued that the agitating mechanism used in US2244186 A would be too difficult to clean with respect to glass powder which would inevitably get trapped in the workings thereof and therefore powder contamination would be inevitable.
- 18 I am aware that the use of tea-strainers as glass powder shakers are well known in the art, and this was confirmed during the hearing. I am additionally alive to the fact that the examiner has not been able to establish that flour sifters are routinely used for sifting glass particles. In addition to Taha Mirshahi comments with regard to the suitability of US 2244186 A as a glass shaker I am unable to see how the handle of US 2244186 A could be modified as a rod whilst still retaining its present functionality in relation to the agitating mechanism of the embodiments disclosed. Therefore, the invention has the necessary inventive step over US 2244186 A.
- 19 No commentary was provided with respect to US 4534858 A. However, it is not clear, to me, how the embodiment disclosed in US 4534858 A may be adapted to include a lid hinged to the screen assembly whilst the screen assembly remains configured to receive the casing 12. It is more likely, if a hinged cover was thought to be a necessary adaption to US 4534858 A, that this hinged cover would be provide

on an upper portion of the casing rather than an upper portion of the screen assembly. Therefore, the invention has the necessary inventive step over US 4534858 A.

- 20 I am unable to establish, from the documents in front of me, whether flour sieves are routinely used as a glass powder shaker wherein they only differ in name and application, or whether the combination of features as required by the main claim do not provide an inventive step.

Conclusion

- 21 I find that the claims comprise an inventive step as required by section 1(1)(b) of the Act. I therefore refer the application back to the examiner to begin preparations for grant.

Appeal

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

Peter Mason

Deputy Director, acting for the Comptroller