INTELLECTUAL PROPERTY OFFICE

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PATENTS ACT 1977

APPLICANT Martin Lister

ISSUE Whether patent applications GB0403997.0, GB0405154.6 and GB0413927.5 comply with sections 1(1)(c) and 14(3)

HEARING OFFICER J E Porter

Introduction

1 This decision concerns three patent applications filed by Mr Martin Lister. The first application is GB 0403997.0, entitled "Perpetual Battery 2" and filed on 24 February 2004. It was published on 14 September 2005 as GB 2 412 013 A. The second is GB 0405154.6, entitled "Perpetual Toothbrush" and filed on 8 March 2004. It was published on 14 September 2005 as GB 2 412 014 A. The third is GB 0413927.5, entitled "Perpetual Torch" and filed on 22 June 2004. It was published on 28 December 2005 as GB 2 415 546 A.

2 On 20 January 2010 the examiner, Mr Robert Barrell, issued three examination reports, one for each application. The reports set out his view that the inventions are incapable of industrial application and are not disclosed in a manner which is clear and complete enough for them to be performed by a skilled person. Further correspondence with the applicant failed to resolve matters, and so the applications have been referred to a hearing officer for a decision on the papers.

The law

3 Section 1(1) sets out the requirement that an invention protected by a patent must, amongst other things, be capable of industrial application:

> *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) it is capable of industrial application;*
> *[…]*

4 Section 4(1) then states that:

> *An invention shall be taken to be capable of industrial application if it can be made or used in any kind of industry, including agriculture.*

5 It is understood that this means industry in its broadest sense, and so the concept of industrial application encompasses anything which is practical or useful. It is also understood that an invention which is alleged to operate in a manner which is clearly contrary to well-established physical laws is regarded as not being capable of industrial application. This is a key point in respect of the present inventions, and I consider submissions that the applicant has made on this point as a part of my analysis below.

6 Also relevant is section 14, which sets out certain requirements that a patent application must fulfill. Section 14(3) sets out the need for a sufficient technical disclosure:

> *The specification of an application shall disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by a person skilled in the art.*

The inventions

7 The three inventions are all concerned with the idea of arranging sets of magnets so that magnetic repulsion acts between the magnets in a particular way which is said to produce motion.

8 With the "Perpetual Battery 2", the motion is used to move a set of coils through the field of a permanent magnet, thus generating a current in the coils. In respect of the "Perpetual Toothbrush", the motion is used to rotate an axle connected to cogs which in turn drives the bristles of a toothbrush. In the case of the "Perpetual Torch", the motion is used to rotate an axle which is connected to a generator supplying power to a light bulb.

9 The "Perpetual Battery 2" application contains one claim, which reads as follows:

> *The Perpetual Battery 2 works by magnetic repulsion acting between a set of magnets which move and the field produced by a cylindrical permanent magnet, the magnets that move are connected to a cylindrical bar which in its turn is connected to a set of coils which move inside a cylindrical permanent magnet the coils of wound wire thus cutting lines of magnetic flux and creating a current, the Perpetual Battery 2 is substantially as described herein with reference to the accompanying description and drawings.*

10 The "Perpetual Toothbrush" application contains one claim, as follows:

> *The Perpetual Toothbrush has four bar magnets that are attached to a bearing race so that they can rotate, a cylindrical magnet is pushed around these bar magnets, the speed setting of the device is dependent on the amount the cylindrical bar magnet surrounds the bar magnets which is dependent on the position of a switch, the device can be switched on to speed 1, switched on to speed 2 (which is maximum speed), or turned off, due to the bar magnets not directly facing the inner surface of the cylindrical magnet (the bar magnets are so orientated that a perpendicular from the line along the centre of each bar magnet is at an angle to the line that passes through the centre line of each bar magnet from the inner surface of the cylindrical magnet to the centre line of each magnet for each bar magnet) a force is created due to magnetic fields of force being cut and the angle of the bar magnets inside the cylindrical magnet causes a resultant moment which thus rotates the bar magnets and hence the axle of the device which then due to an arrangement of cogs rotates three sets of bristles which are used to clean the teeth, the device is substantially as described herein with reference to the accompanying description and drawings.*

11 The “Perpetual Torch” application contains one claim, as follows:

> *The Perpetual Torch is powered by magnetic repulsion and has four bar magnets that are attached to a bearing race so that they can rotate, a cylindrical magnet is pushed around these bar magnets by a plunger which is screwed down, getting power and thus light from the device is dependent on the amount the cylindrical magnet surrounds the bar magnets and on the position of a switch, the device can be switched on or turned off, the bar magnets do not directly facing the inner surface of the cylindrical magnet (the bar magnets are so orientated that a perpendicular from the line along the centre of each bar magnet is at an angle to the line that passes through the centre line of each bar magnet from the inner surface of the cylindrical magnet to the centre line of each magnet for each bar magnet) a force is created due to magnetic fields of force being cut and the angle of the bar magnets inside the cylindrical magnet causes a resultant moment which thus rotates the bar magnets and hence the axle of the device which then due to an arrangement of cogs rotates via a bearing race a permanent magnet cylinder of a generator which supplies a copper coil with energy which then via a switch can turn on a light bulb, the device is substantially as described herein with reference to the accompanying description and drawings.*

Arguments and analysis

12 The examiner maintains that the inventions as claimed are incapable of industrial application and are not disclosed in a manner which is clear and complete enough for them to be performed by a skilled person. His position is set out in his examination reports of 20 January 2010, and is re-iterated in later correspondence. The applicant disagrees, with some statements being made in response between May 2010 and January 2011.

Perpetual Battery 2

13 According to the description and the claims, a set of magnets (described as “permanent magnet rectangular bars”) are mounted on a cylindrical bar which runs through the centre of the device. These magnet rectangular bars are angled with respect to the orientation of an outer cylindrical permanent magnet which surrounds them and the central cylindrical bar. The mounted magnets are coated on three sides with an unspecified material which “stops magnetism going through it”.

14 This arrangement is said to result in a “degree of magnetic repulsion variance” between the mounted magnet rectangular bars and the surrounding cylindrical permanent magnet, which in turn leads to a torque on the central cylindrical bar and thus movement. The central cylindrical bar is connected to a set of coils which are thus moved through a magnetic field, generating a current.

15 In his examination report of 20 January 2010, the examiner stated that the invention as claimed and described could not work, because the magnetic repulsion said to arise from the arrangement of the magnets

> *appears to be the only cause of movement discussed and neither the claim nor the description includes any indication of a means by which energy is input to the device and that might cause the movement and ultimately produce the current. Consequently the invention defies the laws of physics, in particular the law of Conservation of Energy…which holds that while energy can be transformed it cannot be either destroyed or created.*

16 The examiner also objected to an insufficient disclosure, arguing that

> *it is not clear how a torque is produced between a fixed, cylindrical, permanent magnet and set of permanent magnets, however arranged…any force that would result from one "bar" magnet opposing the "cylindrical magnet" would itself be opposed by another "bar" magnet on the opposite side that also opposes the "cylindrical magnet".*

He went on to say that, even if it could be shown that the coating on three sides of the bar magnets would somehow result in a torque, there was no disclosure enabling the skilled person to make such a coating.

17 In response on 6 May 2010, the applicant made brief comments on some prior art cited by the examiner, and asserted that "My Perpetual Battery 2 is perpetual". After a further brief exchange, the applicant then provided, on 29 November 2010, more explanation of how the device was said to work. This constituted a further diagram of the magnet rectangular bars and cylindrical permanent magnet, and an explanation that certain points of the magnet rectangular bars were nearer to the inner surface of the cylindrical permanent magnet than other points, so there was greater magnetic repulsion at those nearer points and so "a torque is created which is passed onto the generator to produce energy".

18 I have considered the description, drawings and claim very carefully, and I have also read all the exchanges between the examiner and the applicant. Having done so, I am of the view that the examiner's assessment is correct.

19 The invention is clearly described as a device containing an arrangement of magnets which will provide, of itself and by virtue of that arrangement, perpetual motion. That perpetual motion is said to produce a current and thus provide a "Perpetual Battery". Indeed, in correspondence the applicant seems clearly to confirm his view that the device is "perpetual" and produces energy. However, there is no discussion of any energy input into the device at all, either to start the motion or to maintain it.

20 Even if I were to accept the statements in the description, and in the further explanation provided by the applicant, that the disclosed arrangement of magnets could result in some rotational motion, the invention as described takes no account of the fact that energy losses must occur in the system (e.g. from friction, air resistance) and so there must be an input of energy in order for the device to run perpetually.

21 I am therefore satisfied that the invention is one which is alleged to operate in a manner clearly contrary to well-established physical laws. It is a claimed perpetual motion device and it follows that the invention is incapable of industrial application. Also, it follows that there is not a sufficient disclosure which would enable a skilled person to perform the invention as claimed.

Perpetual Toothbrush

22 According to the description and claim, the Perpetual Toothbrush uses the same principle as the Perpetual Battery 2 in order to create motion. A set of four bar magnets are mounted on an axle, and can be slid into a surrounding cylindrical permanent magnet. The bar magnets are angled with respect to the orientation

of the cylindrical permanent magnet which surrounds them and, as for the Perpetual Battery 2, this arrangement is said to result in rotation of the bar magnets (and the connected axle). The axle to which the bar magnets are attached is connected via cogs to sets of bristles, and the speed of rotation is said to be variable by varying the extent to which the bar magnets are inserted within the surrounding cylindrical permanent magnet.

23 The examiner's objections in his examination report of 20 January 2010 were in essence the same as for the Perpetual Battery 2, namely that there was no indication of any energy input that might produce the claimed rotation and that the description was insufficient in its disclosure.

24 The applicant replied on 6 May 2010 stating that "My Perpetual Toothbrush would work as the inner surface of the cylindrical magnet is South pole and the angled bar magnet outer surface directed at the cylindrical magnet is also South pole so a torque is created due to magnetic repulsion which is passed onto the three sets of bristles via cogs". He provided a further explanation and diagram on 15 December 2010, which were in essence identical to the further explanation and diagram provided on 29 November 2010 with respect to the "Perpetual Battery 2" application – and to which I refer in paragraph 17 above.

25 Having considered this all carefully, I am satisfied that the application for the Perpetual Toothbrush is not allowable – essentially for the same reasons as I have set out in respect of the application for the Perpetual Battery 2. In particular, the Perpetual Toothbrush invention is clearly stated to provide perpetual motion by virtue solely of the arrangement of the bar magnets and the surrounding cylindrical permanent magnet. There is no discussion of any energy input into the device at all, either to start the motion or to maintain it.

26 I am satisfied that the invention is one which is alleged to operate in a manner clearly contrary to well-established physical laws. Again, therefore, it is a claimed perpetual motion device and so is incapable of industrial application, and there is insufficient disclosure which would enable a skilled person to perform the invention as claimed.

Perpetual Torch

27 According to the description and claim, the Perpetual Torch uses the same principle as the other two inventions in order to create motion. Once again, therefore, the set of four bar magnets can be slid into the surrounding cylindrical permanent magnet, and are angled with respect to the orientation of the cylindrical permanent magnet – this being said to result in rotation. In this case, the bar magnets are connected to an axle which itself is connected to a generator which powers the torch.

28 The objections in the examiner's report of 20 January 2010 were essentially the same as for the inventions of the other two applications, namely that there was no indication of any energy input that might produce the claimed rotation and that the description was insufficient in its disclosure.

29 In response to this, on 6 May 2010, the applicant made brief comments on some

prior art cited by the examiner, and asserted that “My Perpetual Torch is perpetual” and “It uses magnetic repulsion to produce a torque from which a light can be powered”. On 15 December 2010, he provided the same further explanation and diagram as had been provided with respect to the other two inventions, to which I have referred in paragraphs 17 and 24.

30 I have given this matter equally careful consideration and I am satisfied that the application for the Perpetual Torch is also not allowable – essentially for the same reasons as I have set out in respect of the Perpetual Battery 2 and Perpetual Toothbrush applications. As with the other inventions, the Perpetual Torch is clearly stated to work by providing power through perpetual motion provided solely by the arrangement of the bar magnets and the surrounding cylindrical permanent magnet. There is no discussion of any energy input into the device at all, either to start the motion or to maintain it.

31 I am therefore satisfied that this invention is also one which is alleged to operate in a manner which is clearly contrary to well-established physical laws. It is a claimed perpetual motion device and it follows that it is incapable of industrial application. Again, there is also not a sufficient disclosure which would enable a skilled person to perform the invention as claimed.

Conclusion

32 I conclude that the inventions as claimed in applications GB0403997.0, GB0405154.6 and GB0413927.5 are unpatentable under section 1(1)(c) because they are not capable of industrial application. The applications are also not compliant with section 14(3) because the inventions are not disclosed in a manner which is clear and complete enough for them to be performed by a skilled person.

33 I can find no further disclosure in the specifications upon which patentable claims might be based. I therefore refuse the three applications under section 18(3) for failure to comply with section 1(1)(c) and section 14(3).

Appeal

34 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

Dr J E PORTER
Deputy Director acting for the Comptroller