



6 May 2010

PATENTS ACT 1977

APPLICANT Ian Reginald Brindley

ISSUE Whether patent application number
GB 0625213.4 complies with section 1(1)

HEARING OFFICER Mrs S E Chalmers

DECISION

Introduction

- 1 This application relating to a generator powered by passing vehicles was filed on 18 December 2006 with no claim to an earlier priority date. It has been searched and examined, and was published on 25 June 2008 as GB 2444937.
- 2 The examiner considers that all of the claims lack novelty or inventive step as required by sections 1(1)(a) and (b) of the 1977 Patents Act. The applicant responded to the first two reports by way of arguments which were not accepted by the examiner, who therefore proposes to refuse the application.
- 3 Mr Brindley is entitled to be heard before any refusal and has been offered a hearing. However, he is not professionally represented, and is unable to attend the office either in person or by telephone or video link. I am therefore deciding the matter on the basis of the papers on file up to and including Mr Brindley's latest letter of 26 March 2010.

The application

- 4 The application contains 3 pages of description, no drawings, and 6 claims, of which claim 1 is the only independent claim. The claims read:
 - 1 An electricity generator which uses mechanical energy derived from the passage of wheeled vehicles along a road surface where the generator is installed in a cavity of suitable size.
 - 2 A generator according to claim 1 in which the mechanical energy is transmitted by a drive shaft leading from the generator's upper cover plate via suitable gearing to a dynamo.

3 A generator according to claim 2 in which the upper cover plate protrudes above the road surface and is enclosed by a suitable seal and held in position by spring action.

4 A generator according to claim 3 in which the cover plate and drive shaft are enabled to move vertically within set limits, the downward driving motion being activated by the transit of a vehicle wheel across the plate and the return upward motion being achieved by spring action.

5 A generator according to claim 4 in which parts requiring lubrication are provided with lubricant.

6 A generator according to claims 1-5 in which the electric current produced may be either used by its operator or fed into the mains grid in return for remuneration from the relevant utility.

The law to be applied

5 In order to be patentable, under sections 1(1)(a) and (b) of the Act, an invention must (amongst other things) be new and involve an inventive step (i.e. not be obvious to one skilled in the art).

Analysis

6 The documents cited by the examiner are the following patent specifications, all of which were published before the filing date of this application:

WO2006/095037 A1 (Montardit)
US6204568 B1 (Runner)
WO86/07504 A1 (Canonica et al)
GB1332202 A (Pedrick)
CN2804425 Y (Fan)
FR2612012 A1 (Spada)

Three of these are not English language documents; the examiner relied on the figures only for Fan and Spada, and the figures and English language abstract of Canonica.

7 All of the documents cited show electricity generation systems installed in a cavity in a road surface, which derive energy from the passage of wheeled vehicles. Each of these documents therefore discloses all of the features of claim 1.

8 Claim 2 requires a 'drive shaft', which is explained on page 2 of the description as a 'toothed shaft [in contact with] a cogwheel or combination of gearwheels', in other words, a rack and pinion arrangement. All of these documents use a rack and pinion arrangement to convert the movement of a cover plate into rotational movement. In all of the documents except Runner (which uses a pneumatic system to transmit the energy to a generator) the rack and pinion system drives a generator directly through suitable gearing.

- 9 The precise meaning of 'dynamo' in claim 2 has not been argued. Historically, dynamo has been used to mean any electrical generator, but its use is now normally reserved for commutated direct current generators. I am inclined to think the older, broader meaning is the correct one in this context, as the description on page 3 states that an AC/DC inverter *may* be necessary for connection to a mains supply grid. Since an inverter may therefore not be necessary, and since nearly all mains grids use alternating current, I think this contemplates an AC dynamo. If I am correct, then all of the documents except Runner disclose all of the features of claim 2. However, Pedrick also discloses a dynamo (page 2 line 26), so this document discloses all of the features of claim 2 even if the more limited meaning is considered.
- 10 Pedrick uses a 'flexible dirt shield 3', which is obviously intended as a suitable seal, and states (in claim 8) that the electricity may be fed into the national electricity grid system. In all of the documents the range of movement of the cover plate is limited, and return movement is achieved by a spring. Pedrick therefore discloses all of the features of claims 3, 4 and 6.
- 11 The examiner argued that it would be obvious to the skilled person to lubricate parts that need lubricating. I completely agree: this is normal engineering practice.

Conclusion

- 12 I conclude that invention defined in claims 1-4 and 6 is not new, and that the invention as claimed in claim 5 does not involve an inventive step. I also conclude that there is nothing new and inventive in the original disclosure, and it is therefore not possible to amend the application so as to obtain a valid patent.
- 13 In view of my findings, I refuse that application under section 18(3) of the Act.

Appeal

- 14 If Mr Brindley disagrees with anything in my decision, he has a right of appeal to the Patents Court. Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days of the date of the decision stated above.

Mrs S E Chalmers

Deputy Director acting for the Comptroller