

**PATENTS ACT 1977**

APPLICANT Christopher Dalton and Paul Innocenzi  
ISSUE Whether patent application GB1515574.0  
complies with section 1(1)(a)  
HEARING OFFICER H Jones

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**DECISION**

**Introduction**

- 1 Patent application GB1515574.0 has a filing date of 3 September 2015 and claims priority from an earlier application filed on 14 August 2015. The application was published early on 17 February 2016 as GB2529320.
- 2 Despite numerous rounds of correspondence and amendments to their claims, the applicants have been unable to persuade the examiner that their invention is new and have therefore accepted the examiner's offer of a hearing.
- 3 The applicants have asked that a formal decision be made on the basis of the papers. I am grateful to them for providing me with a set of helpful skeleton arguments. I confirm that I have also reviewed all the correspondence on file.

**The invention**

- 4 On occasions a distracted driver may refuel their vehicle at a filling station and then simply drive off, forgetting to stop at the kiosk to pay. The invention seeks to solve this problem by providing the driver with an appropriate reminder before they do so. In simple terms the invention involves checking whether the level in the vehicle's fuel tank has increased and, if so, issuing an alert to the driver to prompt them to pay for their fuel.
- 5 The latest set of claims was submitted on 23 September 2019. There are three independent claims (1, 4 and 8), which read as follows:

1. A method of notifying an individual to the possibility of non-payment of vehicle fuel following fuel addition to the vehicle's fuel system or tank which comprises comparing two or more fuel measurements obtained from the vehicle's fuel measurement system in which an increase in the amount of fuel of the second and/or subsequent measurements compared to the first measurement results in a communication to the individual from an output device which is an integrated component of the vehicle notifying the individual of the possibility of non-payment of fuel characterised in that all of the component parts of the notifying method are located in the vehicle and there

is no communication between a vehicle device and a device outside of the vehicle.

4. The use of a computer program in a computer system in a vehicle for notifying an individual that a fuel payment may be required following addition of fuel to the vehicle at a fuel station in which all of the notifying system's component parts are located in the vehicle and there is no communication between a vehicle device and a device outside of the vehicle.

8. A computer program in a computer system in a vehicle when used in a method for notifying an individual that a fuel payment may be required following addition of fuel to a vehicle at a fuel station in which all of the notifying system's component parts necessary of the notifying method are located in the vehicle and there is no communication between a vehicle device and a device outside of the vehicle.

### **The law**

6 The relevant provisions of the Patents Act are section 1(1)(a), section 2(1) and section 2(2):

*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.*

*2(1). An invention shall be taken to be new if it does not form part of the state of the art.*

*2(2). 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.*

### **Arguments and analysis**

7 The examiner has consistently maintained that the invention is not new in view of prior art found in the original search - US 2014/0236444 (Stefan et al.). At a late stage in the examination process the examiner introduced two further documents - US 2014/0266650 (Newhouse) and JPS 56158913 (Nippon Denso). The applicants are of the opinion that their invention differs in a significant way to the cited prior art.

8 Before turning to look at the cited prior art I must first address an issue of claim construction. The three independent claims all conclude with the limitation that "there is no communication between a vehicle device and a device outside of the vehicle".

There are two points to consider. The first point is what is meant by "a vehicle device"? It is clear from the context that it is a device inside the vehicle, but what does the device do? The claims do not make this clear. Taking a broad view, it could be any device in the vehicle, but I do not think that is what the applicants intend. It seems to me that this "vehicle device" should be construed as the "notifying system" referred to in claims 4 and 8, and the "component parts" which perform the method steps set out in claim 1.

- 9 The second point to consider is what is meant by "no communication". On the one hand it could be read at face value to mean that there is absolutely no communication between the notifying system in the vehicle and an outside device for any purpose. On the other hand it could be interpreted in a more limiting sense to mean that only for the purpose of checking fuel level and issuing a notification is there no communication with an outside device. These two possible interpretations largely explain the difference of opinion between the examiner and the applicants. So, how should "no communication" be construed? On balance I tend towards the former interpretation, for reasons I shall now explain. The independent claims already recite that all the notifying system's component parts are located in the vehicle; if that is so then checking fuel level and issuing a notification does not require communication with an outside device. The "no communication" feature therefore appears to me to be an additional limitation over and above the requirement that the fuel level checking and notifying is performed entirely within the vehicle.
- 10 I can now turn attention to US 2014/023644 ("*Stefan*"), which relates to a method and device for preventing fuel theft at a filling station. It is a more sophisticated system than that of the applicants, but that does not necessarily imply that it cannot anticipate the current claims. Paragraph [0022] succinctly summarises the essential steps of *Stefan's* method; it involves activating an "emergency operating mode" in the vehicle (i.e. a low speed mode) after refuelling has taken place and deactivating the emergency operating mode once payment for the fuel has been made.
- 11 *Stefan's* method certainly includes determining whether fuel has been added to a vehicle's tank: this is clear throughout the document, which discusses a wide range of different ways of doing this. In particular, paragraph [0025] refers to monitoring the level in the fuel tank, and paragraph [0031] discusses monitoring of the fuel gauge and says "a rise of the fuel level of the motor vehicle 11 between the start and end of the switch-off phase of the motor vehicle may be used here as an indication of a refuelling process". This clearly means that measurements of fuel level in the tank at two points in time are compared. I do not think there is any disagreement between the applicants and the examiner on this point.
- 12 If it is determined that refuelling has taken place then the emergency operating mode is activated, but not immediately. There is a warning period. Paragraph [0017] introduces this idea, and it is discussed in more detail in figure 7 and paragraph [0051]. The driver is warned that the emergency operating mode is about to be activated, either by a visual cue on a display in the vehicle or by an aural cue from a loudspeaker in the vehicle. The warning may include text which informs the driver how much of the warning period remains. The warning to the driver that the vehicle is about to enter the emergency operating mode clearly serves to remind the driver that they must pay for their fuel in order that the vehicle may be restored to its normal operating mode.

- 13 Although *Stefan* describes some optional method steps that would require external communication (see [0018] and [0032] for examples), there can no doubt that, up to this point, the method may be carried out using components within the vehicle and without communication to an outside device. I do not think the applicants disagree with this. When read as a whole the skilled reader would readily understand from *Stefan* that the components required to determine that refuelling has taken place are located within the vehicle, as are the means for warning the driver of the onset of the emergency operating mode. Paragraph [0019] is consistent with this when it says that the emergency operating mode may be activated based solely on "internal" information.
- 14 With reference to the earlier discussion about what "no communication" means, if it simply means that determining that fuel has been added and reminding the driver to pay involves no external communication then I could conclude my decision here. *Stefan* clearly discloses such a method, and claim 1 would lack novelty. However, if "no communication" means no communication at all then some further analysis is necessary.
- 15 *Stefan's* method does not stop when the vehicle enters the emergency operating mode. It must be possible to deactivate this mode, and to do this the system must determine whether the fuel has been paid for. The preferred way of determining whether a payment has been made is illustrated in figure 1 and explained further in paragraph [0054] - payment completion information is sent wirelessly 14 from a computer in the filling station 12 to a unit 500 of the device 10 in the vehicle. The applicants see this as the aspect which distinguishes *Stefan* from their invention as claimed, and if the "no communication" clause in the claims means that there is no communication for any purpose then I can see the force of their argument. But this is not the only way to determine whether fuel has been paid for. Paragraph [0023] describes two alternatives in which either a trigger signal is stored on the ignition key (presumably by the operator of the filling station), or the operator of the filling station provides the driver with a token which generates the trigger signal. *Stefan* does not elaborate on these alternatives, but it seems clear to me that what is envisaged is that when the driver returns to their vehicle with either their ignition key or their token, the emergency operating mode is then deactivated. This plainly does not involve communication between a device in the vehicle and a device outside the vehicle.
- 16 So, in summary, *Stefan* clearly discloses a method which involves determining if fuel has been added to a tank by comparing two level measurements, issuing an audible/visible warning that an emergency operating mode is about to be activated which would alert the driver of the need to pay for their fuel, activating the emergency operating mode, and deactivating the emergency operating mode when the driver returns to their car from the filling station kiosk with their key or with a token. All the components which determine the fuel level and provide the warning are located in the vehicle, and no communication between the vehicle and the filling station is required. Accordingly, it is my firm view that *Stefan* shows lack of novelty in claim 1.
- 17 *Stefan's* method is computer implemented and uses a computer system in the vehicle. Paragraph [0057] makes this abundantly clear. Independent claims 4 and 8 therefore lack novelty.
- 18 In view of the above discussion it should also be clear that there is nothing in dependent claims 2-3 and 5-7 which has not been disclosed in *Stefan*.

- 19 Notwithstanding the above analysis I do have sympathy with the applicants' view that there is a distinction between their invention and *Stefan*. Clearly they are not one and the same, but the claims do not define a distinction. However, I consider that drafting such claims remains a possibility. It strikes me that the clearest distinction is that the applicants' method does no more than to provide a warning to the driver for a defined period of time after which the warning is deactivated and operation of the vehicle is otherwise unaffected, whereas *Stefan's* system necessarily has the ability to affect the power output/speed of the vehicle such that it cannot be driven normally. I note that the examiner also hinted at a possible amendment relating to tactile feedback, though this would require careful consideration from an obviousness perspective.
- 20 Although it is not something upon which my decision is based, I should at this point make another brief comment on inventive step (section 1(1)(b)). The examiner has previously argued that in view of *Stefan* the skilled person would consider a system that did no more than remind a driver to pay for fuel to be obvious. I do not find such an argument persuasive. As the applicants have pointed out, *Stefan* quite clearly teaches away from this, by having an emergency operating mode as the way of preventing non-payment of fuel.
- 21 Given the relevance of *Stefan* I do not intend to consider US 2014/0266650 (Newhouse) and JPS 56158913 (Nippon Denso) in detail. I have reviewed both documents and I am satisfied that neither is relevant for novelty purposes. Both monitor fuel level and have an alerting function, but the former is an aid to filling the fuel tank and the latter is a low fuel warning system. One might argue that there is a sense in which their alerts might possibly remind some drivers that they need to pay for fuel, but there is no teaching in either document about this, nor is there anything inherent to the disclosed alerts which would cause every driver to make that connection.

## **Conclusion**

- 22 I have concluded that the invention as defined in the current claims lacks novelty in the light of US 2014/0236444 (*Stefan et al*). However, as I have indicated above, there appears to be a possibility of a saving amendment. I will therefore remit this application back to the examiner so that the applicants have an opportunity to amend their claims, if they so wish. If no amendments are made to the claims then the application will be refused. I note that the examiner has deferred full consideration of clarity and support issues.

## **Period for putting the application in order (the compliance period)**

- 23 If the applicants wish to file amended claims, they will first have to extend the compliance period since the period for putting this application in order expired on 14 February 2020.
- 24 The applicants were informed in the pre-hearing report of 21 February 2020 that the compliance period could be extended by filing the relevant form and fee. The examiner also prepared a further letter specifically on the subject of extending the compliance period, dated 24 March 2020, but I am aware that this was not sent to the applicants until 17 April 2020 due to the disruption to Office procedures as a result of the Coronavirus pandemic.

- 25 Ordinarily the applicants would have been able to obtain a first “as-of-right” extension of the compliance period by filing the necessary form and fee by 14 April 2020, and they would then have been able to request subsequent extensions, at the discretion of the Office. No form or fee has been filed. However, as a result of the Coronavirus pandemic the Office has declared 24 March 2020 and subsequent days until further notice to be “interrupted days”. This means that the deadline of 14 April 2020 for requesting an extension of the compliance period has been extended until the next uninterrupted day. A request for extension of the compliance period received before the next uninterrupted day will extend the compliance period until the next uninterrupted day. The Office has not yet announced when the period of interrupted days will end.
- 26 The applicants are strongly encouraged to file any amended claims as soon as possible, bearing in mind that the extension of the period for putting the application in order may possibly be very short.

### **Appeal**

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

**HUW JONES**

Deputy Director, acting for the Comptroller