

**PATENTS ACT 1977**

APPLICANT                      George Albert Skyner

ISSUE                              Whether patent application  
   GB 0315237.8 complies with section 1(1)

HEARING OFFICER              P M Marchant

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**DECISION**

- 1      Patent application number GB 0315237.8 entitled “Electronic Wall Switch”, was filed by Mr George Skyner on 30 June 2003 based on priority application GB0309302.8, dated 24 April 2003.
- 2      The invention is concerned with wall mounted light switches incorporating an electronic timer for switching the lights on and off. The timer can be set by push buttons or by a remote control unit.
- 3      The examiner issued a number of reports during examination of the application, giving his view that there were difficulties interpreting the specification and determining the precise scope of the claims, but that as far as it was possible to do so, it appeared that the invention lacked novelty and inventive step, contrary to sections 1(1)(a) and 1(1)(b) of the Act. Mr Skyner was unable to accept this view, and the matter has come before me for consideration on the papers.

**The invention**

- 4      The specification is relatively brief and I therefore set it out here in full in the form it was filed, including the figure:

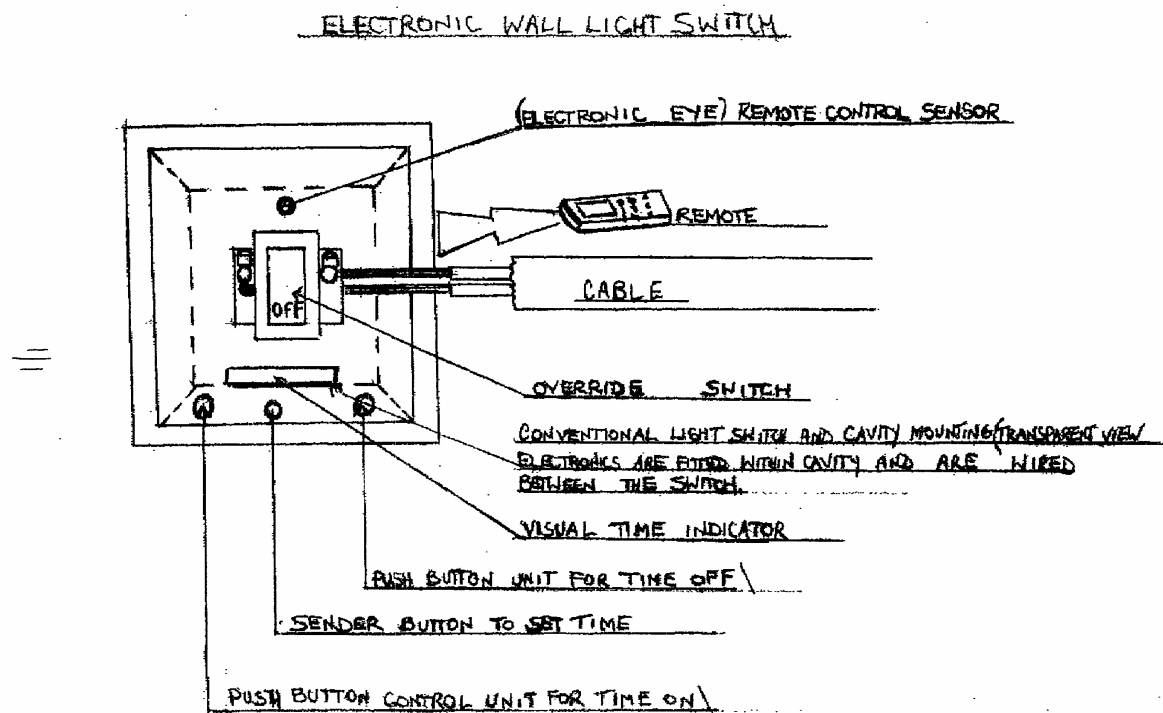
Description

1      *This idea comprises of inserting an electronic timing device inside an electrical wall switch which can be controlled by remote or fingertouch control*

Claims

- 1 Inserting an electronic timing and information device within the casing of an electrical wall light switch, using the normal switch as an override whereby device can be controlled either by remote control unit, or by push button control.
- 2 Wherein the electronic chip can function as a min computer and perform numerous operations in conjunction with the timing part, of the timing and information device.
3. The remote control unit providing different functions, including on/off and providing date and time data. For the electronic timing and information device.
4. Push button control unit providing on/off button control and providing "different functions" including on/off and providing date and time data, for the electronic timing and information device.
5. The remote control unit controlling the electronic timing and information device, via infra-red rays.
6. The remote control unit controlling the electronic and information device via radio waves.
7. Whereby the normal on/off switch can be used as an override allowing light to be switched on, while in the off position.
8. Micro electronics will be inserted into the switch and remote control.

Claims are based on granted Patent having the specification No 2353158.



## The Law

- 5 The first step in assessing novelty and obviousness is to understand what the claims mean. The law relating to construction of claims was reviewed by Hoffmann LJ in *Kirin Amgen Inc v Hoechst Marion Roussel Ltd* [2004] UKHL 46. The key point made in that judgment was that the approach in construing a claim should be to establish “what a person skilled in the art would have thought the patentee was using the language of the claim to mean” and I shall follow that guidance here.
- 6 The provisions in relation to novelty and inventive step are set out in section 1(1) which contains the overall requirements as to patentability, and in sections 2 and 3 which relate to novelty and inventive step respectively. The relevant parts of those sections read as follows:

*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) ...*

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

*(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.*

*(3) ...*

*3. 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).*

- 7 Why is there a requirement that a patent should relate to something new and inventive? It is because it would be unjust for a monopoly to be granted to a person in respect of something that was already in the public domain; that others

were already making, using and selling, or which they would be able to produce using information already publicly available to them. To impose such a monopoly would be an unfair restraint of trade imposed on the public, requiring them either to cease their legitimate activities, or to pay the owner of the monopoly for the right to do something they were already freely entitled to do.

- 8 It is consequently a key part of the examination process in the Office for the examiner to establish that the monopoly claimed by an applicant for a patent is indeed for things which are new and inventive. That is done by interpreting the claims so that the examiner understands as well as he can what the skilled person would consider falls within their scope, and by checking whether any prior art he is aware of (usually as a result of the search he has carried out) is within or without the scope of the claims. If prior art does fall within the claims, or shows them to lack an inventive step, then the claims will not be valid. Where that situation arises during examination, it is sometimes possible for the claims to be limited by amendment so that the proprietor can be granted a narrower but valid monopoly relating to an aspect of the invention that has not previously been disclosed in the prior art. In other cases it may be that the whole of the applicant's idea, in all its detail, is already known or is obvious, in which case it will not be possible for a valid patent to be granted.
- 9 It sometimes happens that the applicant will himself publish information relating to the invention before the priority date, perhaps in an earlier patent specification. That is the case here, Mr Skyner having made a series of patent applications for similar products. Where that occurs, apart from an exception which does not apply here, the earlier disclosure will be effective to invalidate the patent (if the invention is wholly disclosed) or limit the possible scope of the monopoly (if the invention is partly disclosed ) in exactly the same way as if the publication was by a different party.
- 10 Considering novelty more closely, the main principle is set out in *The General Tire and Rubber Company v The Firestone Tyre and Rubber Company Ltd* [1972] RPC 457 at pages 485-6. Here, Sachs LJ said:

*"If the prior inventor's publication contains a clear description of, or clear instructions to do or make, something that would infringe the patentee's claim if carried out after the grant of the patentee's patent, the patentee's claim will have been shown to lack the necessary novelty, that is to say, it will have been anticipated."*

In the following paragraph, the judgment highlighted that a prior publication which contains directions capable of being carried out in a manner which would infringe the claims but were as likely to be carried out in a way which did not do so, does not anticipate. It went on to say that the disclosure:

*"must contain clear and unmistakable directions to do what the patentee claims to have invented"*

and that the prior inventor:

*"must be clearly shown to have planted his flag at the precise destination"*

*before the patentee”.*

This case was decided under earlier legislation but the principles remain valid.

- 11 In assessing inventive step, the well-established approach is set out in *Windsurfing International Inc v Tabur Marine (Great Britain) Ltd* [1985] RPC 59. It involves firstly identifying the claimed inventive concept, secondly establishing the common general knowledge known to a skilled but unimaginative addressee in the art at the priority date, thirdly identifying the differences, if any, between the matters cited as being "known or used" and the alleged invention, and finally assessing "whether, viewed without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to the skilled man or whether they require any degree of invention".
- 12 The comments made by Hoffman LJ in *Sabaf SpA v MFI Furniture Centres Ltd* [2005] RPC 10 are also relevant to the present case. They relate to collocations, that is to say collections of features, each a part of the invention but which have no synergy or interdependence between them. Paragraph 24 of the judgment reads:

*“before you can apply section 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.”*

It is consequently necessary before applying the *Windsurfer* test, to assess whether the elements forming the present invention relate to a single whole whose various features are interdependent, or to a device consisting of a collocation of different unrelated features.

### **The present case**

- 13 The present claims are not presented in the usual way; claims normally contain references indicating appendancy of dependent claims to independent claims, and there are no such references here. Nevertheless, it is clear that appendancy is intended and indeed it is possible to infer to a large degree what that appendancy was meant to be. It is enough for the purposes of this investigation to know that claim 1 is the only independent claim and that the others are dependent on it. There are also some passages whose meanings are not entirely clear, but it is possible to make a reasonable attempt at interpreting them. In any event, as is always the case, it is necessary to determine what the skilled person would understand the author to be using the words of the claims to mean.
- 14 Claim 1 is reasonably clear. It commences with “inserting” but I do not think the skilled addressee would take literally that the monopoly should apply to the process of inserting. He would rather take the claim to relate to the product consisting of an electronic timing and information device inserted into a light switch and having the other features set out in the claim.

- 15 The claim does not state in terms that the timing device is intended to control the switching on and off of the light attached to the light switch, nor explain what is meant by “overriding”. But claim 7 assists with both these points, explaining that overriding is performed by the normal on/off switch and thereby irresistibly implying that the purpose of the timing and information device is to switch the light on and off. This also tells the reader that “overriding” refers to the overriding of timer switching by manual switching.
- 16 It is not clear from claim 1 or any of the remainder of the specification precisely what kind of timed control of the lights is intended. The prior art shows timers in which a light already on is set to continue “on” for a delay period, timers in which a light not presently switched on is set to come on after a delay period, and timers which switch lights on and off, in a 24 hour cycle for example. Claims 3 and 4 refer to “on/off” and “date and time” data, but I do not consider that amounts to a disclosure of the type of timing.
- 17 It is not clear in claim 1 what is meant by the qualification “and information” in the “timing and information device”. There is no further disclosure in the specification as to what might be intended by this. Where the timer can be adjusted, many arrangements will involve information being provided to the timer to enable that to happen, and I consequently take it that the qualification “and information” may refer to the timing information. I consider that it may alternatively refer to some other kind of information.
- 18 Finally in claim 1, since the claim says “remote control or push button control”, I consider the skilled person would take “push button control” to refer to the use of push buttons provided separately for the purpose, for example on the casing of the wall switch as is shown in the figure, rather than push buttons on the remote control.
- 19 It is clear that claim 2 is intended to be appendant to claim 1. I believe the skilled person would understand from this claim that the device of claim 1 may further incorporate an electronic chip functioning as a computer. The word “min” would, I think, be disregarded by the skilled addressee. One might entertain the possibility that it was an abbreviation of “minute” or “minimum” but reject either of these as meaningless. The only genuine possibility seems to be that it is a misspelling of “mini”, however it is apparent that what is being described is a micro-computer, not a mini-computer, so I believe that would also be rejected. The word would, as I say, be disregarded. The electronic chip may apparently be a different component to the timing and information device or possibly the same component. The claim says that it performs “numerous operations” in conjunction with the timing part, but it is not said what any of those operations are. In summary, the claim amounts to the provision of an electronic chip functioning as a computer as part of the device.
- 20 Claim 3 is intended to be appendant to claim 1 at least. It provides that the remote control unit provides an on/off function, and also date and time data for the timing and information device. Given the inference from claims 1 and 7 that the timing device provides timed control of the light, this claim would, I believe, be taken to claim that on/off, and time and date information may be provided by the remote control in order to program the timing device. The reference to “different

functions” is not considered to impose any limitation on the claim beyond what is already required by providing “on/off” and “date and time data”.

- 21 Claim 4 is intended to be appendant to claim 1 at least. It refers to a similar operation in respect of the push buttons as is claimed in claim 3 in respect of the remote control.
- 22 Claims 5 and 6 are intended to be appendant to claim 1 at least. They provide for the remote control unit to operate via infra-red rays or via radio waves respectively.
- 23 Claim 7 is intended to be appendant to claim 1 at least and provides for the normal on/off switch to be able to override the timing device. This claim adds the further detail that the override operates to switch the light on when it is off.
- 24 Claim 8 is intended to be appendant to claim 1 at least and refers to the use of micro-electronics in the switch and remote control.

### **The Prior Art and Novelty**

- 25 The examiner cited a number of prior specifications during examination. The first of these was a previous patent specification, GB2353158, of which Mr Skyner is himself the proprietor. This patent discloses substantially the same invention as the present application, although in the prior specification it can be used in a range of different applications (including in a power plug, a power socket, a ceiling rose and an electrical appliance such as a video, computer or television) as well as in a wall light switch. The prior invention consists of inserting an electronic timing device into any of these components and providing a remote controller which generates date and time information in order to program the timing device for on and off operation. The remote control can provide an “override” function. This specification also discloses the subject matter of claims 2, 3, 5 and 6 when they are considered independently of claim 1. This is close prior art but I do not consider it anticipates claim 1 since it does not disclose either the use of the normal switch to provide an override function or the use of push buttons (separate from the remote control) to control the timer.
- 26 Another of Mr Skyner’s previous patent specifications, GB2336962, was also cited by the examiner. The specification consists of a copy of one of the two pages of the description of GB2353158, plus a copy of its original claims and copies of four of its five pages of figures. The specification consequently provides no more information than GB2353158 does itself, and I will not consider it further.
- 27 Prior specification WO 92/16881 discloses an electronic timer for controlling electricity supply to electrical apparatus in a building, and may be installed in a conventional wall light switch for controlling lighting. It uses push buttons to program the timer, and the operation of the timer can be overridden by use of the normal switch. It also discloses the subject matter of claims 4 and 7 considered independently of claim 1. This again is close prior art, having all the features of claim 1 apart from the use of a remote controller.

- 28 US 5473204 discloses a wall light switch having a microchip timer incorporated in it for setting either a period for the light to be switched on, or a delay for which the light will be off and after which it will be switched on. The time is programmed using the same switch that is used to turn the light on or off in the normal way, by having a spring biased “timer” position. Repeated pressing of the switch to the “timer” position generates the programmed delay period; for example five presses provide a five minute period if the base period is one minute. Settings for the base period, and for whether the light is to be on or off during the delay period are set for example by DIP switches. The specification also discloses the subject matter of claims 2 and 7 considered independently of claim 1. This too is close prior art involving manual operation of a timer inserted in a wall light switch and having a manual override by use of the normal light switch, but it does not disclose the use of a remote controller. It is also arguable whether the spring biased operation of the normal switch when setting the timer can be said to be “push button” control.
- 29 US 4494012 provides a wall light switch with “on”, “off” and “timer” positions which when set to the timer position provides a delayed turn off period. This is less relevant than the other prior art. It is concerned primarily with providing a timer arrangement which consumes electricity only while the timer is running. It makes no provision for varying the duration of the timer period. Nor is there any other disclosure of “information” associated with the timer in the sense required by claim 1 and I consequently do not consider it discloses a “timing and information device”. I do consider that control of the timer is disclosed however sufficiently to read onto claim 1, since the timer is controlled when it is set running. The system has no remote control function but does have an override function using the normal switch. Again it is arguable whether the operation of the normal switch to set the timer can be said to be “push button” control.
- 30 US 4194182 (which I shall refer to as “‘182”) discloses a wall light switch having a timer for setting either an “on” period or a delay period after which the light will come on. The timer duration is set by a rotary control and is initiated by a push button. The light may alternatively be controlled by remote digital signals transmitted to the switch through the mains wiring of the building. The automatic operation can be overridden by the normal switch as explained in the “summary of the invention”. Although the remote control operates the light directly rather than the timer, this arrangement does in fact anticipate claim 1. This is apparent since the “timing and information device” of claim 1 can be taken to correspond to the whole of the circuitry in ‘182 comprising the receiver for receiving digital command information over the mains wiring, the timer and the circuitry for actuating the lights in response either to the receiver or to the timer. That being the case, the disclosure of ‘182 provides: “an electronic timing and information device ... whereby device can be controlled either by remote control unit, or by push button control” and therefore anticipates claim 1.
- 31 The switch in ‘182 is said to “maintain its manual operation capability”. I consider the skilled person would take this to mean that the light can be switched either on or off manually from the state arrived at under automatic control. I consequently find that claim 7, which requires an override to switch the light on when it is off, is also anticipated by ‘182.



- 32 US 4002925 discloses a wall light switch having on and off positions and a central “timer-on” position in which a 24 hour timer operates to switch the lights on and off. The “on” and “off” times during the 24 hour period at which the timer is desired to operate are set by use of the normal switch in two further, spring biased, positions “on set” and “off set”. This once again is close prior art involving manual operation of a timer included in a wall light switch and having a manual override by use of the normal light switch, but does not disclose the use of a remote controller. As with US 5473204, it is arguable whether the spring biased operation of the normal switch to set “on” and “off” times can be said to be “push button” control.
- 33 US 3985982 relates to a wall light switch for switching the light on and off at pre-determined times of day. A manual override is provided which in some embodiments uses the normal switch. Timer settings are made using rotary switches rather than push buttons and there is no disclosure of remote control. This discloses all the features of claim 1 apart from the provision of a remote control or push button control.
- 34 Summarising the position on novelty, it appears that prior patent specification US4194182 anticipates claim 1 and claim 7. The disclosure in ‘182 differs from the present embodiment in that the remote control system operates through mains wiring rather than by a separate hand held device, and that the remote control system operates the lights directly rather than providing data to set the timer and so differs in some respects from the embodiment described in the present specification. However, claim 1 is drawn broadly enough to encompass this arrangement within its scope, and therefore lacks novelty over ‘182. The other prior art specifications, although in some cases closely relevant, all lack one or more of the features of claim 1 and I consequently do not consider them to anticipate claim 1.

### **Inventive Step**

- 35 The determination of inventive step according to the guidance in the *Windsurfing* case involves firstly identifying the claimed inventive concept. I take the inventive concept in relation to each of the claims, to be that which I have identified as its meaning in paragraphs 13 to 24 above.
- 36 It is secondly necessary to assess the common general knowledge known to the skilled addressee. The skilled person will be a design engineer working in the field of electrical timer systems for household appliances. He will be familiar with electronic and electrical circuitry including household wiring systems, and particularly knowledgeable about the design and operation of electronic and electrical timers. He will also be familiar with commercial timer systems sold for household use to enable lights and other appliances to be switched on and off for periods of time and for daily, or longer, switching cycles. He will be knowledgeable about engineering and manufacturing devices, processes and methods used to produce the sort of small household articles of which such timers are a part, and he will have a range of general design, engineering and manufacturing knowledge appropriate to underpin his specialist knowledge.
- 37 Taking the final two steps together, the third is to identify the differences, if any,

between the matters cited as being "known or used" and the alleged invention, and the fourth is to assess "whether, viewed without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to the skilled man or whether they require any degree of invention". What is "known" can conveniently be taken to be represented by the prior art discussed above, and I have already set out in relation to each prior specification what the differences are between its disclosure and the present invention. It therefore remains to be assessed in the fourth step of the test, using any of the prior art disclosures as a starting point, whether the differences involve an inventive step.

- 38 I found in paragraph 24 above that GB2353158 discloses all the features of claim 1 apart from the use of the normal switch to provide an override function and the use of push buttons to control the timer. It is not considered that there is any interdependence between these two features and consequently, following the guidance in *Sabaf*, if the invention is to involve an inventive step, it is necessary to show that there has been an invention in applying either of them independently of one another to the arrangement in '158.
- 39 Considering firstly the feature of the use of the normal light switch as an override switch. This idea is ubiquitous in the prior art, being found in almost every one of the prior specifications cited by the examiner. It is disclosed in each of WO 92/16881, US 5473204, US 4494012, US 4194182, US 4002925 and US 3985982, which range in date from 1976 to 1992. One must conclude that this idea was either part of the skilled person's common general knowledge, or at least that it was so common as to be a feature which it was natural for any designer to include in a light switch/timer combination. I conclude that there is no inventive step in providing this feature in the present arrangement.
- 40 The second of the two features is the use of push buttons to provide control inputs to the timer. This really involves two aspects; firstly the idea of providing timer inputs separately from the remote control and secondly of using push buttons rather than a rotary knob or a flip switch or touch sensitive panels or any other sort of input device that might be possible. I do not think either of these aspects, or the two taken in combination, amount to an inventive step. Given the requirement to provide input data to a timer incorporated in a wall light switch, nothing could be more obvious than to provide an input device of some kind on the switch itself to perform this function. Whether the input arrangement consists of push buttons, flip switches or any other sort of device is simply a matter of choice for the designer. He will be familiar with them all and will select one or the other depending on engineering convenience, cost, appearance, ease of use and a range of other criteria. There is no invention in using push switches. This assessment is supported by the range of examples in the prior art, which all involve inputs to the timer positioned on the wall switch, and which between them provide a wide range of different mechanisms including rotary, push switches, spring biased flip switches and touch switches.
- 41 Since neither the use of the normal switch for override, nor the use of push switches separately from the remote control, involves an inventive step, I find that there is no inventive step in the invention defined in claim 1.

- 42 The further limitation in claim 7, that the override is from the “off” state to the “on” state is also obvious. A manual override by definition will reverse the setting provided by the timer control, so will allow either an “off” to “on” override, an “on” to “off” override, or both. There is no invention in specifying any one of these rather than the others; they are all abundantly obvious to the skilled person. I consequently find that claim 7 is also shown to lack inventive step.
- 43 GB2353158 also discloses in terms the subject matter of claims 2, 3, 5 and 6. Since claim 1 lacks inventive step in light of ‘158, claims 2, 3, 5 and 6 also lack inventive step for the same reason as claim 1.
- 44 Claim 4 relates to a “push button control unit providing on/off button control and providing “different functions” including on/off and providing date and time data, for the electronic timing and information device.” Using GB2353158 as a starting point once again, I note that it discloses the provision of “on/off and ... date and time data, for the electronic timing and information device” via the remote control. The difference between what is known and the invention is firstly, as in relation to claim 1, the use of the normal light switch to override timer operation, and secondly the use of push button switches rather than a remote control to provide “on/off” and “date and time” data. Following the *Sabaf* criterion, I consider these two features to be independent of one another and I therefore need to assess them independently.
- 45 I have already found in relation to claim 1 that the use of the normal light switch to override the timer does not involve an inventive step. The same applies in claim 4.
- 46 The second feature is the use of push button switches rather than the remote control to provide “on/off” and “date and time” data. I have already found that the idea of providing data to the timer by push button input instead of by remote control does not involve an inventive step and this argument applies equally when the type of data is specified. I consequently find that neither of the two different features of claim 4 involves an inventive step, and that claim 4 itself therefore lacks an inventive step.
- 47 Claim 8 relates to the use of micro-electronics in the timer device and in the remote control. GB2353158 discloses the use of micro-electronics in the timer. The skilled person would consider that the remote control in ‘158 (operating, as is described, optionally by infra red or radio waves) must certainly involve electronics and would consider it most probable that the electronics used would be micro-electronics. Claim 8 consequently lacks an inventive step.
- 48 I have found all the claims to be invalid. There is a little more disclosure in the figure, namely the use of an electronic eye as a remote control sensor, a visual time indicator, and push buttons having specific functions. There is also the reference to “fingertouch” control in the description. These features might potentially form the basis of claims and I will go on and consider whether they have already been disclosed or are obvious.
- 49 The electronic eye is already disclosed in ‘158, so cannot form a valid distinction over the prior art.

- 50 I consider it obvious to provide a visual time indication on the switch, since it would be part of the skilled person's common general knowledge at the priority date that time indications can be provided on timers. There consequently appears to be no inventive step in providing a visual time indication in the present arrangement.
- 51 I do not consider there is any invention in providing the input push buttons with the particular functions of "time on", "time off" and "set time" as depicted in the figure. The skilled person would have as his disposal a range of different input button configurations, as is demonstrated by the different configurations shown in the prior art. He will select one, depending on engineering advantage, cost, appearance, ease of use and other criteria. There appears to be no special advantage to the particular arrangement that has been depicted, and I do not consider it involves an inventive step.
- 52 Finally, I do not suppose that the reference to "fingertouch" control in the opening paragraph is intended to mean anything different from "push button" control in the claims. If it is, then I do not consider it could form any inventive distinction over the prior art, because of the wide range of manual input devices available to the skilled person and commonly used in the art, as I have set out in paragraph 40 above in relation to the idea of using push buttons.

### **Conclusion**

- 53 In conclusion, I have found in the light of the prior art cited by the examiner that claims 1 and 7 of the application lack novelty contrary to section 1(1)(a) of the Act, and that all the claims lack inventive step contrary to section 1(1)(b). I have also considered the remainder of the disclosure, including the figure, but can find no subject matter which could provide support for a valid claim. I therefore refuse the application under section 18(3) of the Act.

### **Appeal**

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

**P M Marchant**

Deputy Director acting for the Comptroller