

**OPINION UNDER SECTION 74A**

Patent	GB 2596440 B
Proprietor(s)	Prevayl Innovations Limited
Exclusive Licensee	
Requester	Prevayl Innovations Limited
Observer(s)	
Date Opinion issued	23 August 2022

**The request**

1. The Comptroller has been requested by Prevayl Innovations Limited (“the requester”) to issue an opinion as to whether claims 1-3, 5-9, 11-12, 17-23 and 25-28 of GB 2596440 B (“the patent”) are (a) infringed by the WHOOP (RTM) 4.0 in combination with the ANY-WEAR™ Compression Top under section 60(1) of the UK Patents Act 1977 and (b) infringed by the ANY-WEAR Compression Top under section 60(2) of the UK Patents Act 1977.

2. The request includes the following evidence describing the MZ-Switch:

A1 – <https://join.whoop.com/en-uk/>

A2 – screenshot of <https://whoop.com/membership/body/>

A3 – screenshot of <https://shop.whoop.com/products/any-wear-compression-top/?variant=41222496026807>

A4 – PDF export from [https://support.whoop.com/APP\\_FEATURES\\_COACHING/Understanding\\_Your\\_WHOOP\\_Features/4.0\\_WHOOP\\_Body](https://support.whoop.com/APP_FEATURES_COACHING/Understanding_Your_WHOOP_Features/4.0_WHOOP_Body)

A5 – PDF export from [https://support.whoop.com/APP\\_FEATURES\\_COACHING/Understanding\\_Your\\_WHOOP\\_Features/4.0\\_Measuring\\_Skin\\_Temperature](https://support.whoop.com/APP_FEATURES_COACHING/Understanding_Your_WHOOP_Features/4.0_Measuring_Skin_Temperature)

A6 – PDF export from [https://support.whoop.com/STRAP\\_CHARGING/Commonly\\_Asked\\_Questions/Can\\_I\\_Turn\\_My\\_WHOOP\\_Off%3F](https://support.whoop.com/STRAP_CHARGING/Commonly_Asked_Questions/Can_I_Turn_My_WHOOP_Off%3F)

A7 – PDF export from

[https://support.whoop.com/STRAP\\_CHARGING/Charging\\_Battery/4.0 Battery Pack Overview](https://support.whoop.com/STRAP_CHARGING/Charging_Battery/4.0_Battery_Pack_Overview)

A8 – screenshot of

<https://twitter.com/joevennare/status/1438535308040101898?lang=en-GB>

A9 – PDF export from

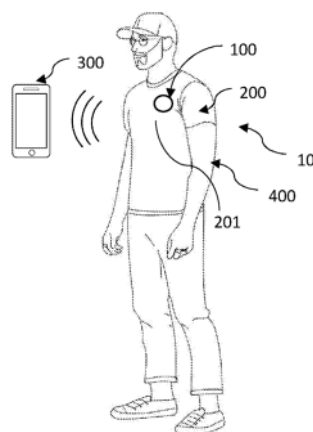
[https://support.whoop.com/Connectivity/Commonly Asked Questions/Why is my WHOOP %22Catching Up%22%3F](https://support.whoop.com/Connectivity/Commonly_Asked_Questions/Why_is_my_WHOOP_%22Catching_Up%22%3F)

## Observations and observations in reply

3. No observations were received in response to the request.

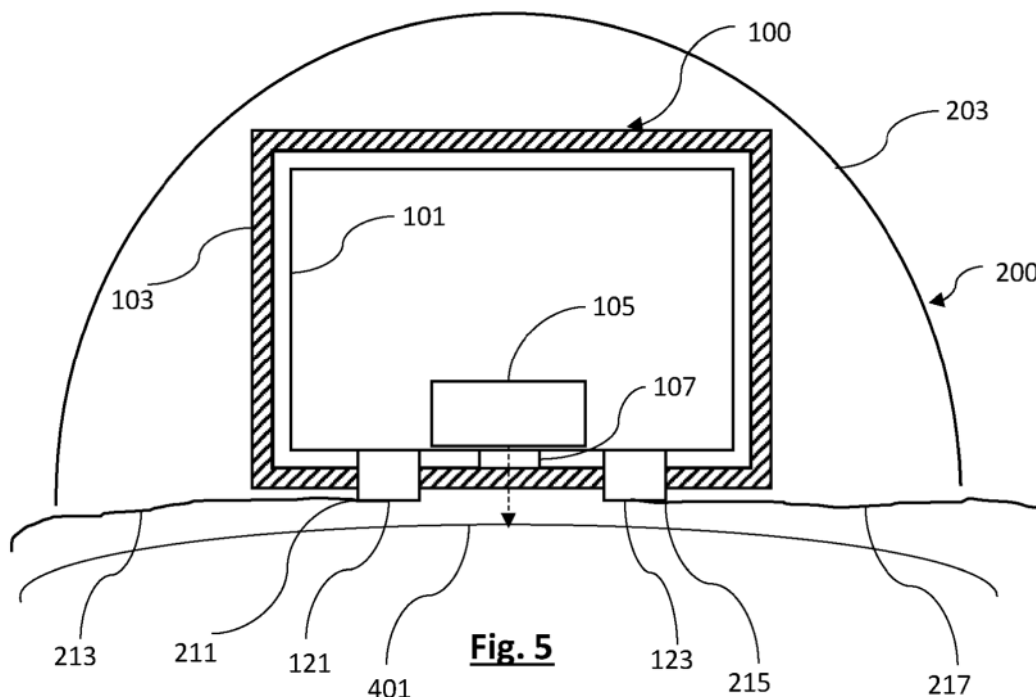
## The patent

4. The patent, GB 2596440 B, is titled “A wearable article”. It was filed on 19<sup>th</sup> February 2020, published on 29<sup>th</sup> December 2021 and granted on 1<sup>st</sup> June 2022. The patent remains in force.
5. The patent relates to an electronics module for a wearable article. The patent explains that wearable articles can be designed to interface with a wearer of the article, and to determine information such as the wearer's heart rate, rate of respiration, activity level, and body positioning. Such properties can be measured with a sensor assembly that includes a sensor for signal transduction and/or microprocessors for analysis. The articles include electrically conductive pathways to allow for signal transmission between an electronics module for processing and communication and sensing components of the article.
6. Figure 1 below shows an example system 10 comprises an electronics module 100, a garment 200, and a mobile device 300. The garment 200 is worn by a user 400. The electronics module 100 is removably coupled to the garment 200. The electronics module 100 is arranged to integrate with sensing components incorporated into the garment 200 so as to obtain signals from the sensing components. The sensing components comprise electrodes.



**Fig. 1**

7. Beneficially, the removable electronic module 100 may contain all of the components required for data transmission and processing such that the garment 200 only comprises the sensor components and communication pathways. In this way, manufacture of the garment 200 may be simplified. In addition, it may be easier to clean a garment 200 which has fewer electronic components attached thereto or incorporated therein. Furthermore, the removable electronic module 100 may be easier to maintain and/or troubleshoot than embedded electronics.
  
8. The electronics module 100, illustrated in figure 5 below, comprises an interface in the form of electrical contacts 121, 123 that extend through the outer layer of fabric material 103. The first electrical contact 121 conductively connects with a first terminal region 211 of the garment 200. The first terminal region 211 enables the electronics module 100 to conductively connect to sensing components of the garment 200 via first electrically conductive pathway 213 of the garment 200. The second electrical contact 123 conductively connects with a second terminal region 215 of the garment 200. The second terminal region 215 enables the electronics module 100 to conductively connect to sensing components of the garment 200 via second electrically conductive pathway 217 of the garment 200. The sensing components may be one or more electrodes. The electronics module 100 includes a sensor 105 arranged to monitor a property of the user. The sensor 105 may be, for example, a temperature sensor 105 arranged to monitor a core body temperature or skin-surface temperature of the user. The sensor 105 may be, for example, a humidity sensor 105 arranged to monitor a hydration or sweat level of the user. The electronics component 105 is disposed proximate to a bottom surface of the electronics module 100 which is proximate to the skin surface 401 of the user wearing the garment 200. The rigid housing 101 comprises an opening 107 in the bottom surface through which the electronics component 105 has line of sight. The material 103 includes a window aligned with the sensor such that the sensor has line of sight through the housing.



9. The patent has 31 claims including a single independent claim 1. Claim 1, adopting the references used by the requester, reads:

*1A A wearable article comprising:*

*1B an electronics module comprising:*

*1C a housing; and*

*1D a sensor disposed within the housing, the sensor being arranged to monitor a property of the environment external to the electronics module through the housing,*

*1E wherein the housing is constructed such that the sensor has line of sight through the housing; and*

*1F a compression garment comprising*

*1G an electronics module holder arranged to removably receive the electronics module,*

*1H the compression garment comprises an opening arranged such that when the electronics module is provided in the electronics module holder, the sensor is aligned with the opening in the garment and has line of sight with a skin surface of a wearer of the compression garment.*

10. The requester has requested I also consider whether the WHOOP 4.0 and ANY-WEAR Compression Top infringes dependent claims 3, 5-9, 11-12, 17-23 and 25-28 which read:

*2. A wearable article as claimed in claim 1, wherein the electronics module holder comprises the opening.*

*3. A wearable article as claimed in claim 1 or 2, wherein the electronics module holder is a pocket.*

*5. A wearable article as claimed in claim 3, wherein the pocket is positioned on an inner surface of the garment.*

*6. A wearable article as claimed in any of claim 3 to 5, wherein the pocket is an elasticated pocket arranged to apply a compressive force to help hold the electronics module in a generally fixed position within the pocket.*

*7. A wearable article as claimed in any preceding claim, wherein the housing comprises an opening aligned with the sensor such that the sensor has line of sight through the housing.*

8. A wearable article as claimed in any preceding claim, wherein the housing comprises a window aligned with the sensor such that the sensor has line of sight through the window, optionally wherein the window is constructed from a transparent, translucent, or light-diffracting material.

9. A wearable article as claimed in any preceding claim, wherein the sensor comprises one or more of a temperature sensor, humidity sensor, and presence sensor.

11. A wearable article as claimed in any preceding claim, wherein the sensor comprises an optical sensor.

12. A wearable article as claimed in any preceding claim, wherein the electronics module further comprises a light source disposed within the housing, the light source is arranged to emit light through the housing.

17. A wearable article as claimed in any preceding claim, wherein the housing comprises a top surface and a bottom surface, the sensor is disposed proximate to the bottom surface of the housing, and the electronics module further comprises an antenna provided proximate to the top surface of the housing.

18. A wearable article as claimed in claim 17, wherein the electronics module comprises a battery adapted to be recharged wirelessly.

19. A wearable article as claimed in any preceding claim, wherein the electronics module comprises a processor disposed within the housing.

20. A wearable article as claimed in claim 19, wherein the processor is arranged to receive signals from the sensor.

21. A wearable article as claimed in claim 19 or 20, wherein the housing comprises a top surface and a bottom surface, the electronics module comprises a printed circuit board on which the processor is provided, and the electronics module further comprises an antenna provided above the printed circuit board and proximate to the top surface of the housing.

22. A wearable article as claimed in claim 21, wherein the electronics module further comprises a rechargeable battery provided separately to the printed circuit board.

23. A wearable article as claimed in claim 22, wherein the battery is adapted to be recharged wirelessly.

25. A wearable article as claimed in any preceding claim, wherein the electronics module further comprises a communicator arranged to communicate with an external device.

26. A wearable article as claimed in any preceding claim, wherein the compression garment is an item of clothing.

27. A wearable article as claimed in claim 26, wherein the item of clothing is an item of athletic clothing.

28. A wearable article as claimed in any preceding claim, wherein the garment is a top.

## Claim construction

11. Before I can consider whether the patent could be infringed, I need to construe the claims of the patent – that is to say, I must interpret them in the light of the description and drawings as instructed by Section 125(1):

*125(1) For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.*

12. In doing so I must interpret the claims in context through the eyes of the person skilled in the art. Ultimately the question is what the person skilled in the art would have understood the patentee to be using the language of the claims to mean. This approach has been confirmed in the recent decisions of the *High Court in Mylan v Yeda*<sup>1</sup> and the *Court of Appeal in Actavis v ICOS*<sup>2</sup>.
13. The requester has not put forward any argument concerning the construction of claim 1. I also have no issue with claim 1 and consider it to be clear when read in light of the description and drawings. I am unable to identify anything in the patent that would justify deviating from a normal interpretation of the language used in the claim.
14. I consider the person skilled in the art to be a designer and manufacturer of electronic modules for wearable articles and of wearable articles incorporating such electronic modules. In my opinion, the skilled person would have no issue with understanding the meaning of claim 1. The same is true of the dependent claims.

## Infringement - the law

15. Section 60 Patents Act 1977 governs what constitutes infringement of a patent:

*(1) Subject to the provision of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he does any of the following things in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say –*

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<sup>1</sup> Generics UK Ltd (t/a Mylan) v Yeda Research and Development Co. Ltd & Anor [2017] EWHC 2629 (Pat)

<sup>2</sup> Actavis Group & Ors v ICOS Corp & Eli Lilly & Co. [2017] EWCA Civ 1671

*(a) where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;*

*(b) where the invention is a process, he uses the process or he offers it for use in the United Kingdom when he knows, or it is obvious to a reasonable person in the circumstances, that its use there without the consent of the proprietor would be an infringement of the patent;*

*(c) where the invention is a process, he disposes of, offers to dispose of, uses or imports any product obtained directly by means of that process or keeps any such product whether for disposal or otherwise.*

*(2) Subject to the following provisions of this section, a person (other than the proprietor of the patent) also infringes a patent for an invention if while the patent is in force and without the consent of the proprietor, he supplies or offers to supply in the United Kingdom a person other than a licensee or other person entitled to work the invention with any of the means, relating to an essential element of the invention, for putting the invention into effect when he knows, or it is obvious to a reasonable person in the circumstances, that those means are suitable for putting, and are intended to put, the invention into effect in the United Kingdom.*

16. In *Actavis v Eli Lilly*<sup>3</sup>, Lord Neuberger states that the problem of infringement is best approached by addressing two issues, each of which is to be considered through the eyes of the notional addressee of the patent in suit, i.e. the person skilled in the relevant art. Those issues are:

*(i) does the variant infringe any of the claims as a matter of normal interpretation; and, if not,*

*(ii) does the variant nonetheless infringe because it varies from the invention in a way or ways which is or are immaterial?*

17. If the answer is “yes” to either question, there is infringement; otherwise there is not.

18. The second issue to be addressed is whether the variant provided by the product varies in a way that is immaterial. The court in *Actavis* provided a reformulation of the three questions in *Improver*<sup>4</sup> to provide guidelines or helpful assistance in connection with this second issue. These reformulated questions are:

*(i) Notwithstanding that it is not within the literal meaning of the relevant claim(s) of the patent, does the variant achieve substantially the same result in substantially the same way as the invention, i.e. the inventive concept revealed by the patent?*

*(ii) Would it be obvious to the person skilled in the art, reading the patent at*

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<sup>3</sup> *Actavis UK Limited and Others v Eli Lilly and Company* [2017] UKSC 48

<sup>4</sup> *Improver* [1990] FSR 181

*the priority date, but knowing that the variant achieves substantially the same result as the invention, that it does so in substantially the same way as the invention?*

*(iii) Would such a reader of the patent have concluded that the patentee nonetheless intended that strict compliance with the literal meaning of the relevant claims(s) of the patent was an essential requirement of the invention?*

19. To establish infringement in a case where there is not literal infringement, a patentee would have to establish that the answer to the first two questions was "yes" and that the answer to the third question was "no".
20. The first step in determining if there is any infringement under section 60(1) is to consider whether the WHOOP 4.0 in combination with the ANY-WEAR Compression Top falls within the scope of the claims of the patent.

## **The Whoop**

21. The requester details a wearable article which includes an electronics module (WHOOP 4.0) and a compression garment (Whoop ANY-WEAR Compression Top). Both are available from [www.whoop.com](http://www.whoop.com) and are designed to be used together.
22. The images reproduced below are included in the request and show the WHOOP 4.0 and the Whoop ANY-WEAR Compression Top. The requester has added labels indicating what they consider to be the various parts of the WHOOP 4.0 and the Whoop ANY-WEAR Compression Top. I am content with the requester's identification of the parts of both the WHOOP 4.0 and the Whoop ANY-WEAR Compression Top.
23. The WHOOP 4.0 is an activity tracking device that measures metrics such as a user's heart rate, blood oxygen level and skin temperature to provide health and fitness related statistics. The device comprises measurement sensors and electronic components, and pairs with the user's mobile phone to send data to an application installed on the phone. The image below shows how the Whoop may be supported by a wrist strap to hold the device, and therefore the sensors, against a user's wrist.

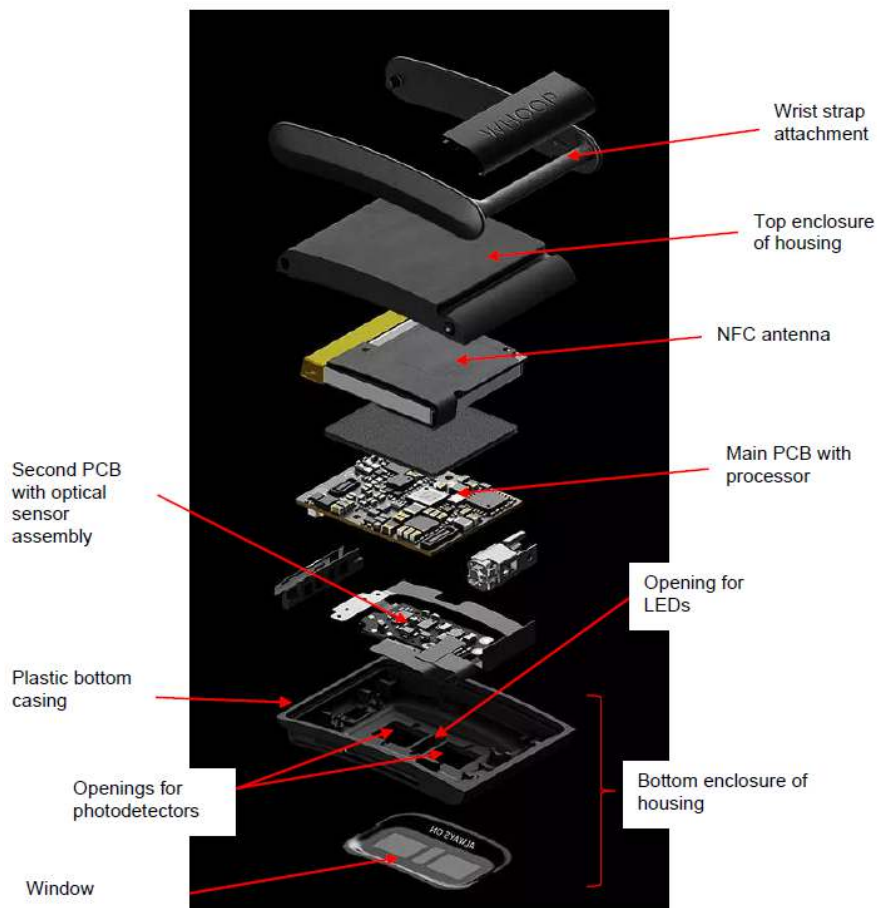




24. The WHOOP 4.0 includes an optical sensor assembly. The optical assembly includes an array of LEDs and photodetectors. The LEDs emit light to the skin tissue of the wearer and the photodetectors measure the reflected light. This enables the WHOOP 4.0 to measure and collect information from a wearer. The image below shows the WHOOP 4.0 removed from any supporting article. The optical sensors are disposed within the housing and have a line of sight through the bottom enclosure of the housing via openings in the casing. The openings are covered by a window.



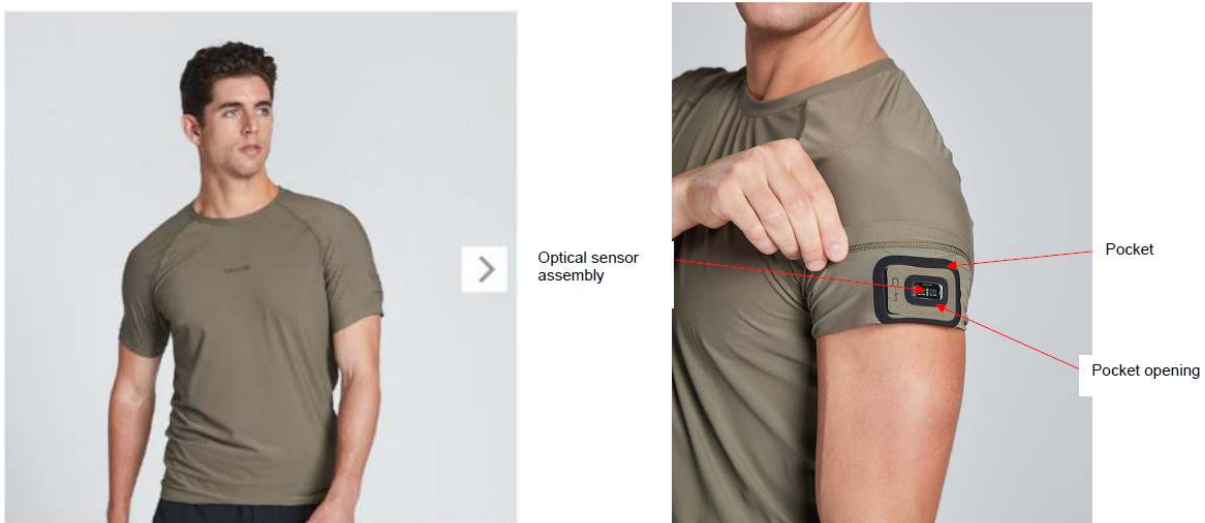
25. The image below is an exploded diagram of the WHOOP 4.0 provided by the requester. The image shows the various components of the WHOOP 4.0 including the optical sensor assembly along with the openings and window. The WHOOP 4.0 includes other components such as a processor and NFC antenna.



26. The WHOOP 4.0 is useable with a WHOOP battery pack for wireless charging. The WHOOP battery pack is slid over the WHOOP 4.0 for charging as shown in the images below.



27. Whilst the WHOOP 4.0 can be worn on a wrist strap as shown above, there is an accessory range compatible with the WHOOP 4.0 which includes garments having an internal pocket (WHOOP pod) for housing the WHOOP 4.0 to allow a user to position the WHOOP 4.0 in alternative positions also in contact with their body.
28. One such garment is the ANY-WEAR Compression Top shown in the images below. The ANY-WEAR Compression Top includes an internal pocket for housing the WHOOP 4.0. The pocket includes an opening which exposes the optical sensor assembly of the WHOOP 4.0 such that it can measure properties from the skin of the wearer.



**Does the WHOOP 4.0 in combination with the ANY-WEAR Compression Top infringe the patent as a matter of normal interpretation?**

29. I will now consider whether the combination of the WHOOP 4.0 and the ANY-WEAR Compression Top falls within the scope of claim 1.
30. I consider it to be clear that the WHOOP 4.0 in combination with the ANY-WEAR Compression Top form a wearable article.

31. I consider it also to be clear that the WHOOP 4.0 is an electronics module having a housing and sensors disposed within the housing. The sensors include an optical assembly having LEDs and photodetectors which monitor metrics of a wearer i.e. monitors a property of the environment external to the module. The housing is provided with openings and a window such that the optical sensors have a line of sight through the housing. Therefore, in my view, the WHOOP 4.0 is an electronics module having the features 1B-1E of claim 1.
32. The ANY-WEAR Compression Top includes an internal pocket for housing the WHOOP 4.0. The pocket includes an opening for the optical sensor assembly such that when the optical sensor assembly is positioned in the pocket, the optical sensor assembly has a line of sight to the skin surface of a wearer. Therefore, in my view, the ANY-WEAR Compression Top is a compression top having the features 1F-1H of claim 1.
33. Therefore, it is my opinion that the combination of the WHOOP 4.0 with the ANY-WEAR Compression Top falls within the scope of claim 1 of the patent. As a result, the importation, disposal and/or manufacture thereof in the UK would constitute infringement under section 60(1).
34. As the answer to the first *Actavis* question is 'yes', it is not necessary for me to consider the second *Actavis* question. The combination of the WHOOP 4.0 with the ANY-WEAR Compression Top in my opinion directly infringes claim 1 of the patent.
35. The requester has also provided argument that the combination of the WHOOP 4.0 with the ANY-WEAR Compression Top infringes dependent claims 2--3, 5-9, 11-12, 17-23 and 25-28. On the basis of the material before me, I am of the opinion that the combination of the WHOOP 4.0 with the ANY-WEAR Compression Top does include the features of dependent claims 2--3, 5-9, 11-12, 17-23 and 25-28. Hence, those claims would also be infringed by the importation, disposal and/or manufacture thereof in the UK.

### **ANY-WEAR Compression Top – indirect infringement**

36. The requester has argued that the supply and offering to supply the ANY-WEAR Compression Top in the UK by Whoop Inc. without their consent constitutes indirect infringement under s.60(2).
37. For there to be indirect infringement, a number of requirements have to be met.
38. The first is that what is being supplied, i.e. the ANY-WEAR Compression Top has to be means relating to an essential element of the invention for putting the invention into effect. The second is that the party supplying the essential means knows (or it would be obvious to a reasonable person) that those means are suitable for putting and are intended to put the invention into effect. The "intention" to use the means for putting the invention into effect is on the part of the end user, not the supplier of the product, as held by the Court of Appeal in *Grimme v Scott*<sup>5</sup>. In this decision, Jacob LJ set out the following criteria for interpreting the requirements of s.60(2) for

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<sup>5</sup> *Grimme v Scott* [2010] EWCA Civ 1110

knowledge and intention:

*“In short, the knowledge and intention requirements of ... section 60(2) are satisfied if, at the time of supply or offer of supply, the supplier knows, or it is obvious in the circumstances, that ultimate users will intend to put the invention into effect. That is to be proved on the usual standard of balance of probabilities. It is not enough merely that the means are suitable for putting the invention into effect (for that is a separate requirement), but it is likely to be the case where the supplier proposes or recommends or even indicates the possibility of such use in his promotional material.”*

39. As discussed above the ANY-WEAR Compression Top includes all of the features of the compression garment of claim 1 i.e. features 1F-1H.
40. The compression garment in claim 1 requires an electronics holder and an opening which allow for the electronics module to be positioned within the holder with a line of sight of the skin surface of a wearer. The compression garment is tight fitting to the wearer which holds the electronics module having a sensor tightly against the skin to ensure that accurate measurements can be obtained. Therefore, in my view, the compression garment is an essential element of the invention for putting the invention into effect.
41. It is clear from the material before me, and in particular A2-A4, that the ANY-WEAR Compression Top is advertised by Whoop Inc. as an accessory intended for use with the WHOOP 4.0. Whoop Inc. also provides direct instruction to insert the WHOOP 4.0 into the pocket of the ANY-WEAR Compression Top such that the optical sensor assembly of the WHOOP 4.0 has a line of sight through the pocket opening. A user following said instructions would put the invention of claim 1 into effect.
42. I believe that Whoop Inc. at the time of supply or offer of supply knows or it is obvious, that the ultimate user purchasing the ANY-WEAR Compression Top intends to put the invention into effect.
43. Therefore, in my opinion, the supply or offer to supply in the UK by Whoop Inc. of the ANY-WEAR Compression Top without the consent of the requester constitutes indirect infringement of claims 1-3, 5-9, 11-12, 17-23 and 25-28.

## **Opinion**

44. It is my opinion that the combination of the WHOOP 4.0 with the ANY-WEAR Compression Top falls within the scope of claims 1-3, 5-9, 11-12, 17-23 and 25-28 of the patent as a matter of normal interpretation. Accordingly, it is my opinion that the making, selling, offering for sale, using or importing the combination of the WHOOP 4.0 with the ANY-WEAR Compression Top infringes GB 2596440 B under Section 60(1)(a) of the Act.
45. It is also my opinion that the supply or offer to supply in the UK by Whoop Inc. of the ANY-WEAR Compression Top without the consent of the requester infringes GB 2596440 B under Section 60(2) of the Act.

Marc Collins  
Examiner

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**NOTE**

*This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.*