

OPINION UNDER SECTION 74A

Patent	GB 2589947 B
Proprietor(s)	Prevayl Innovations Limited
Exclusive Licensee	
Requester	Prevayl Innovations Limited
Observer(s)	
Date Opinion issued	11 August 2022

The request

1. The Comptroller has been requested by Prevayl Innovations Limited (“the requester”) to issue an opinion as to whether claims 1-4 and 16 of GB 2589947 B (“the patent”) are infringed by the Whoop 4.0 and Whoop Any-Wear Sports Bra 4.0 (“the Product”) distributed by Whoop Inc.
2. The request includes the following evidence describing the Product:
A1 – screenshot of <https://shop.whoop.com/products/any-wear-sports-bra/?variant=41222496420023>
A2 – screenshot of <https://join.whoop.com/en-uk/>

Observations and observations in reply

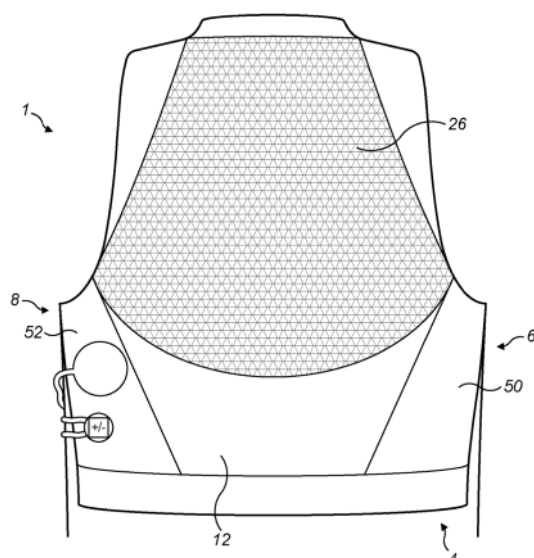
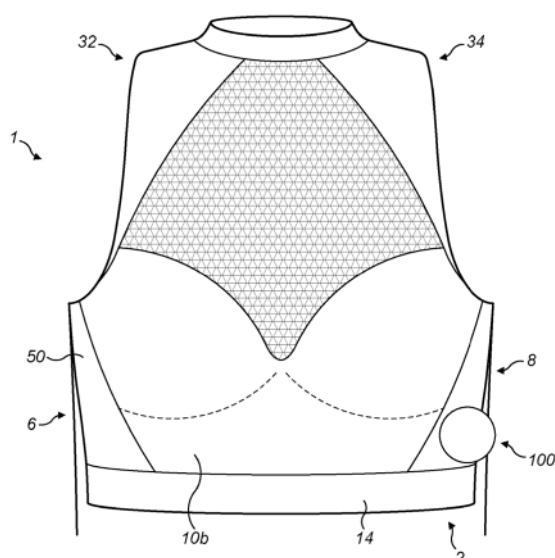
3. No observations were received in response to the request.

The patent

4. The patent, GB 2589947 B, is titled “Bra, garment and method”. It was filed on 25th August 2020 with a priority date of 9th September 2019, published on 16th June 2021 and granted on 15th December 2021. The patent remains in force.
5. The patent relates to a bra for use in measuring biosignals of a wearer, a garment comprising such a bra, and a method of manufacture. The patent explains garments incorporating sensors are wearable electronics used to measure and collect information from a wearer. Such garments are commonly referred to as 'smart

clothing'. It is advantageous to measure biosignals of the wearer during exercise and garments designed for such a purpose are generally close-fitting.

6. It is known to provide a bra, sports bra, or other close-fitting top-like garment to which an electronic device (i.e. an electronics module, or related components) is attached in a prominent position, such as on the chest or between the shoulder blades. Whilst this positioning may allow the device to be readily accessed, it can be both uncomfortable for the wearer and unsightly.
7. In existing devices, sensors are typically provided on the underband to help ensure that the sensors are held in tight contact with the skin. A downside of this approach is that the underband needs to be wide in order to ensure that a sufficient surface area is provided for the sensors. This means that conventional bras for biosensing have a wider underband than conventional bras. A wider underband is uncomfortable for the wearer, especially during prolonged user or exercises. Advantageously, it has been found that positioning the sensors in other regions of the bra and in the side region, in particular, ensures sufficient skin sensor contact while avoiding the need to provide an unnecessarily wide underband. In addition, a far larger sensor surface area can be provided than in existing bras for biosensing. The underband may therefore be a narrow underband. This increases bra comfort during exercise.
8. The bra 1 comprises a front region 2, a rear region 4, and a pair of side regions 6, 8 extending between the front region 2 and the rear region 4. The front 2, rear 4 and side regions 6, 8 are together configured to extend circumferentially around the torso of the wearer when the bra 1 is in the as-worn configuration.
9. The front region 2 comprises a front underlay panel 10a and the rear region 4 comprises a rear panel 12. The front underlay panel 10a and rear panel 12 are both formed from a breathable knit fabric material. The front underlay panel 10a and rear panel 12 extend into the side regions 6, 8 to connect at either side of the bra 1. The lower edge of the front underlay panel 10a and the lower edge of the rear panel 12 are parallel and vertically aligned. A narrow underband 14 extends below the lower edge of the front underlay panel 10a and rear panel 12.



10. The front region 2 further comprises a pair of breast-contacting surfaces in the form of moulded cups 16, 18, a sternal panel 20 formed of a breathable mesh material, a pair of front shoulder strap portions 22, 24 and a front overlay panel 10b.
11. The bra 1 for use in measuring biosignals of a wearer further comprises a measuring apparatus 100 comprising an electronics module 102 and a sensor assembly 104 comprising one or more sensors. The sensor assembly is not provided in the underband but is provided in one of the side regions.

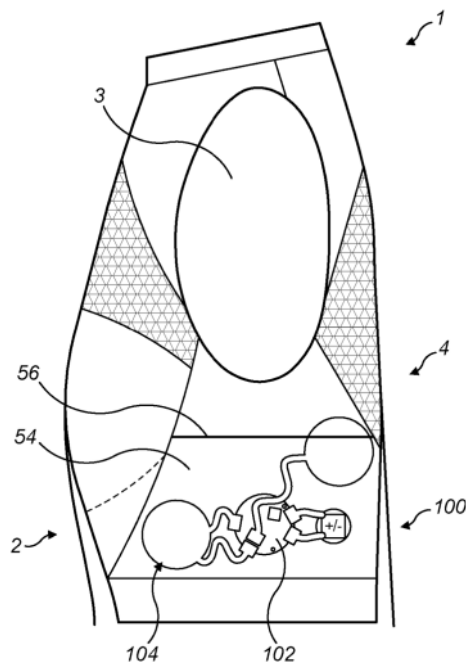


FIG. 3

12. The patent has 18 claims including a single independent claim 1. Claim 1, adopting the references used by the requester, reads:
 - 1A *A bra for use in measuring biosignals of a wearer,*
 - 1B *the bra comprising: a front region comprising a pair of breast contacting surfaces;*
 - 1C *a rear region;*
 - 1D *a pair of side regions extending between the front region and the rear region;*
 - 1E *an underband, the underband extending below a lower edge of the front region, rear region and side regions;*
 - 1F *and a measuring apparatus comprising a sensor assembly comprising one or more sensors,*
 - 1G *wherein all of the sensor assembly is provided in one of the side regions and is not provided in the underband.*

13. The requester has requested I also consider whether the Product infringes dependent claims 2-4 and 16 which read:

2. A bra as claimed in claim 1 further comprising a mounting arrangement, wherein the mounting arrangement comprises a pocket provided in the one of the side regions where the sensor assembly is provided, optionally the pocket is a hidden pocket.

3. A bra as claimed in claim 2 wherein the inside of the pocket is accessible to provide access to the electronics module of the measuring apparatus.

4. A bra as claimed in either of claims 3 wherein the electronics module is removable from the pocket.

16. A method of manufacturing a bra as claimed in any of claims 1 to 15, the method comprising the steps of: providing a bra comprising: a front region comprising a pair of breast contacting surfaces; a rear region; a pair of side regions extending between the front region and the rear region; an underband, the underband extending below a lower edge of the front region, rear region and side regions; and a measuring apparatus comprising a sensor assembly comprising one or more sensors, wherein all of the sensor assembly is provided in one of the side regions, and is not provided in the underband.

Claim construction

14. 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.

15. 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*¹ and the *Court of Appeal in Actavis v ICOS*².
16. 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

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

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

light of the description and drawings. I consider the features of “front”, “rear” and “side” regions to be clear, particularly as the claim defines the front region as comprising a pair of breast contacting surfaces. I am unable to identify anything in the patent that would justify deviating from a normal interpretation of the language used in the claim.

17. I consider the person skilled in the art to be a designer and manufacturer of “smart clothing” such as sports bras incorporating sensors used to measure and collect information from a wearer. 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

18. 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 –

(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.

19. The request has made no indication that indirect infringement under 60(2) is to be considered.
20. In *Actavis v Eli Lilly*³, Lord Neuberger states that the problem of infringement is best approached by addressing two issues, each of which is to be considered through the

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

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?

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

22. 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*⁴ 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 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 claim(s) of the patent was an essential requirement of the invention?

23. 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”.

24. The first step in determining if there is any infringement under section 60(1) is to consider whether the Product falls within the scope of the claims of the patent.

The Product

25. The requester explains that the Product includes a sensor module (Whoop 4.0) and a sports bra (Whoop Any-Wear Sports Bra 4.0). Both are available from www.whoop.com and are designed to be used together.

26. The images reproduced below were included in the request and show the Whoop Any-Wear Sports Bra 4.0. The requester has added labels indicating what they consider to be the various parts of the sports bra. The sports bra comprises a front region, a rear region, a pair of side regions extending between the front and rear

⁴ *Improver* [1990] FSR 181

regions, and an underband extending around the circumference of a wearer below the front, rear and side regions. The underband is connected to the lower edges of the front, rear and side regions. I am content with the requester's identification of the parts of the sports bra.



27. The Whoop 4.0 is a wearable sensor module which is received in an internal pocket provided on the sports bra as shown in the images below. The pocket is located in one of the side regions and is positioned above the underband. The Whoop 4.0 includes an array of optical sensors. The pocket has an opening through which the optical sensors have a line of sight to the skin surface which enables them to measure and collect information from a wearer.



Does the Product infringe the patent as a matter of normal interpretation?

28. I will now consider whether the Product falls within the scope of claim 1.
29. I consider it to be clear that the Whoop Any-Wear Sports Bra 4.0 includes a front region, a rear region, a pair of side regions and an underband as required by the bra of claim 1 i.e. of features 1A – 1E.
30. I consider it also clear that the Whoop 4.0 sensor module includes a sensor assembly comprising one or more sensors as required by feature 1F of the sensor module of claim 1.
31. As explained above, in existing sports bras, sensors are typically provided on the underband to help ensure that the sensors are held in tight contact with the skin. A key feature of claim 1 is that all of the sensor assembly is provided in one of the side regions and is not provided in the underband i.e. feature 1G. As shown in the images above the measuring apparatus (Whoop 4.0) is located in an internal pocket on the side region of the bra (Whoop Any-Wear Sports Bra 4.0). The internal pocket is located above the underband.
32. Therefore, it is my opinion that the Product falls within the scope of claim 1 of the patent. Therefore, the importation, disposal and/or manufacture thereof in the UK would constitute infringement under section 60(1).
33. As the answer to the first *Actavis* question is 'yes', it is not necessary for me to consider the second *Actavis* question. The Product in my opinion directly infringes claim 1 of the patent.
34. The requester has also provided argument that the Product infringes dependent claims 2-4 and 16. On the basis of the material before me, I am of the opinion that the Product does include the features of dependent claims 2-4 and 16. Hence those claims would also be infringed by the importation, disposal and/or manufacture thereof in the UK of the Product.

Opinion

35. It is my opinion that the Product falls within the scope of claims 1-4 and 16 of the patent as a matter of normal interpretation. Accordingly, it is my opinion that the Product infringes GB 2589947 B under Section 60(1)(a) of the Act.

Marc Collins
Examiner

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.