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EUROPEAN QUALIFYING EXAMINATION 2023

Paper D2

This paper comprises:

Part II: Legal Opinion

Questions 1-3 (45 points)

[001] Today (7 March 2023) you received the following letter.

[002] We, Whiter, are a manufacturer of nappies based in Sweden. We develop nappies for newborns who have to be hospitalised. The health of such newborns has to be checked frequently and one way to do so is by analysing their urine. We produce and sell our nappies in Europe, China and the USA.

[003] Nappies that indicate the presence of urine with a visual indicator on the nappy have been known for a long time. They are disclosed, for example, in a journal article published in March 2016 describing a nappy with a strip of paper on the nappy's outer part that changes colour when the nappy gets wet. This type of indicator has a major drawback: it is necessary to look at the nappy and thus remove the newborn's clothes to see if urine is present.

[004] We have been doing some research and come up with the idea of using a control unit (abbreviated "CU") and electrodes (abbreviated "E") to detect the presence of urine. When urine is present, an acoustic signal is generated to warn someone taking care of the newborn wearing the nappy. The acoustic signal remedies the above drawback.

[005] When doing this research, a member of our team remembered the "Handbook of Urine Detection", which was published in May 2017 and discloses nappies comprising an electronic visual indicator, a control unit and electrodes to detect the presence of urine. The handbook teaches that the detection of the presence of urine can be achieved with electrodes made of any conductive material. The examples in the handbook show electrodes made of conductive plastic. Albeit electronic, this indicator is still visual, and therefore it is still necessary to remove the baby's clothes to see if urine is present.

[006] Our research also revealed that a nappy with a control unit, besides merely detecting the presence of urine, can surprisingly also be used to directly analyse the urine on the nappy by means of specific electrodes. In this way, the newborn’s health can be checked more efficiently.

[007] Based on our research, on 8 September 2020 we filed European application EP-WA, which discloses and claims a nappy comprising acoustic warning means, a control unit and electrodes made of metal for detecting the presence of urine (abbreviated “CU-Em-sound”).

[008] On the same day we also filed European application EP-WB, which discloses and claims:

- in independent claim 1, a nappy comprising a control unit and specific electrodes G made of conductive plastic (abbreviated “CU-EG”), wherein the control unit and the electrodes are configured to measure glucose in the urine, and
- in independent claim 2, a nappy comprising a control unit and specific electrodes P made of conductive plastic (abbreviated “CU-EP”), wherein the control unit and the electrodes are configured to measure the pH of the urine.

Such specific electrodes belong to the state of the art, but have previously been used only in the food industry.

[009] Both applications were filed using EPO Form 1001 without claiming priority. They were searched by the EPO.

[010] For EP-WA the search report only cites documents in category A, including the above-mentioned handbook. The examination and designation fees for EP-WA were paid.

[011] The EPO found that EP-WB lacked unity. We did not pay any additional search fee and, upon entering the examination phase, we restricted EP-WB to the first invention, i.e. CU-EG. The renewal fee for EP-WB was paid in August 2022. The Rule 71(3) communication was issued for EP-WB, and we replied to it on 28 February 2023 by paying the prescribed fees and by filing the translations of claim 1 as filed.

[012] For about a year, we have been producing and selling nappies comprising acoustic warning means, a control unit and electrodes made of gold (a known metal) for detecting the presence of urine.

[013] We have also realised that the second aspect of EP-WB is worth pursuing. Therefore yesterday we filed European divisional application EP-WDIV, directed to a nappy comprising a control unit and the electrodes P made of conductive plastic for measuring the pH of the urine. We have not paid any of the required fees for this divisional application yet, but we plan to pay them tomorrow. When preparing this letter for you, we realised that we made a mistake by indicating EP-WA as the parent application in the EPO Form 1001 for EP-WDIV.

[014] As we progressed with our research, we filed European application EP-WC on 6 May 2022, without claiming priority. The description of EP-WC discloses, in a first aspect, a nappy which transmits a signal to a baby phone when urine is present. In this way, someone taking care of the baby is warned that the nappy is wet. In a second aspect, independent from the first, the description of EP-WC discloses a nappy in which the absorbent comprises substance X. Substance X has been known for decades as an absorbent, but it has never been used in nappies, and it is surprisingly efficient at neutralising the odour of the urine. EP-WC contains only one claim, which is directed to a nappy comprising a transmitter for sending a signal to a baby phone, a control unit and electrodes made of metal for detecting the presence of urine (abbreviated “CU-Em-transmit”). Last month we received the search report for EP-WC, which cites only documents in category A.

[015] We are soon going to change our production line by replacing the acoustic warning means with transmitters. We are confident that nappies which transmit signals to baby phones improve the quality of the newborns' sleep and therefore will be much more appreciated by our customers than the ones emitting the acoustic signal.

[016] Our competitor Zuma is planning to launch a new line of nappies in the US market next month that neutralise urine odours and in which the absorbent comprises substance X. This was announced on its website last week.

[017] Researching our competitor's activities, we discovered European application EP-Z, which was filed by Zuma on 14 January 2019 claiming priority from its US application US-Z. The latter was filed on 15 January 2018 and then abandoned. Application EP-Z discloses and claims a nappy comprising a control unit and electrodes made of metal for detecting the presence of urine (abbreviated "CU-Em"). The only metals mentioned in EP-Z are copper and platinum.

[018] The European search report for EP-Z was published in July 2019. It cites European application EP-Y, which was filed in November 2016, published in May 2018 and withdrawn after publication. EP-Y discloses and claims a nappy comprising an electronic visual indicator, a control unit and electrodes made of silver (a known metal) for detecting the presence of urine.

[019] We inspected the file of EP-Z and noticed that a patent was granted with a single claim directed to a nappy comprising a control unit and electrodes made of metal for detecting the presence of urine, wherein the electrodes are not made of silver. The mention of the grant of the patent was published on 17 August 2022. Furthermore, we have noticed that US-Z discloses a nappy comprising a control unit and electrodes made of a conductive material for detecting the presence of urine, and that the only exemplary embodiment in US-Z concerns electrodes made of conductive plastic.

Questions:

1) Analyse the patent situation for the following subject-matter:
   (a) nappies comprising a control unit and electrodes made of metal for detecting the presence of urine (CU-Em),
   (b) nappies comprising acoustic warning means, a control unit and electrodes made of metal for detecting the presence of urine (CU-Em-sound),
   (c) nappies comprising a control unit and the electrodes G for measuring glucose in the urine (CU-EG),
   (d) nappies comprising a control unit and the electrodes P for measuring the pH of the urine (CU-EP),
   (e) nappies comprising a transmitter for sending a signal to a baby phone, a control unit and electrodes made of metal for detecting the presence of urine (CU-Em-transmit),
   (f) nappies in which the absorbent comprises substance X.

2) As the situation currently stands
   (a) is Zuma free to produce and sell nappies that neutralise urine odours and in which the absorbent comprises substance X, and
   (b) are we free to produce and sell:
      - nappies comprising acoustic warning means, a control unit and electrodes made of gold for detecting the presence of urine (CU-E(Au)-sound),
      - nappies comprising a transmitter for sending a signal to a baby phone, a control unit and electrodes made of gold for detecting the presence of urine (CU-E(Au)-transmit),
      - nappies comprising a control unit and the electrodes G for measuring glucose in the urine (CU-EG), and
      - nappies comprising a control unit and the electrodes P for measuring the pH of the urine (CU-EP)?

3) What can we do to improve our rights and position?