

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

BLACKBIRD TECH LLC d/b/a
BLACKBIRD TECHNOLOGIES,

Plaintiff,

v.

TOMTOM, INC.,

Defendant.

C.A. No. 16-687-GMS

JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Blackbird Tech LLC d/b/a Blackbird Technologies (“Blackbird Technologies”) hereby alleges for its Complaint for Patent Infringement against TomTom, Inc., on personal knowledge as to its own activities and on information and belief as to all other matters, as follows:

THE PARTIES

1. Plaintiff Blackbird Technologies is a limited liability company organized under the laws of Delaware, with its principal place of business located at 200 Baker Avenue, Suite 203, Concord, MA 01742.

2. Defendant TomTom, Inc. (“TomTom”) is a corporation organized and existing under the laws of the state of Massachusetts, with its principal place of business located at 2400 District Avenue, Suite 410, Burlington, MA 01803.

3. Defendant transacts substantial business, either directly or through agents, on an ongoing basis in this judicial district and elsewhere in the United States.

JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the provisions of the Patent Laws of the United States of America, Title 35, United States Code §§ 100, *et seq.*

5. Subject-matter jurisdiction over Blackbird Technologies' claims is conferred upon this Court by 28 U.S.C. § 1331 (federal question jurisdiction) and 28 U.S.C. § 1338(a) (patent jurisdiction).

6. This Court has personal jurisdiction over Defendant because, *inter alia*, Defendant has established minimum contacts with this forum. Defendant regularly conducts business in the district, including by selling and/or offering to sell products, such as fitness trackers, in the state of Delaware. For example, Defendant uses product dealers and distributors in the United States to offer to sell and sell fitness trackers in Delaware, among other states, including tomtom.com, amazon.com, and Dick's Sporting Goods.

7. Defendant's actions constitute patent infringement in this District in violation of 35 U.S.C. § 271, and Defendant has placed infringing products into the stream of commerce, with the knowledge and understanding that such products are sold and/or offered for sale in this District. The acts by Defendant have caused injury to Blackbird Technologies within this District.

8. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391 (b) and (c) and § 1400(b) and because Defendant transacts business within this District and has sold and/or offered for sale in this District products that infringe claims of U.S. Patent No. 6,434,212.

BACKGROUND

9. Defendant's product line includes, but is not limited to, the TomTom Runner, Spark and Multi-Sport sports watches. Upon information and belief, each of the Runner, Spark

and Multi-Sport watches is available with an optional heart rate monitoring feature.

10. Defendant's manufacture, use, offer for sale, sales and/or importation of each of the TomTom Runner, Spark and Multi-Sport watches, including their respective cardio versions with the heart rate monitoring feature, infringe one or more claims of the Patent-in-Suit, as explained in greater detail below.

11. Blackbird Technologies' initial complaint was filed on August 9, 2016. On or about August 15, 2016, Blackbird Technologies sent a copy of the initial complaint, including a copy of the Patent-in-Suit, to Defendant via priority U.S. mail. Upon information and belief, Defendant received such correspondence.

12. Defendant was served the initial complaint on September 9, 2016.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 6,434,212

13. Blackbird Technologies reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

14. On August 13, 2002, U.S. Patent No. 6,434,212 (the "212 Patent") entitled "Pedometer," a true and correct copy of which is attached hereto as Exhibit 1, was duly and legally issued by the U.S. Patent and Trademark Office. Blackbird Technologies is the owner by assignment of all right, title, and interest to the 212 Patent, including all rights to recover for any and all infringement thereof. The 212 Patent is valid and enforceable.

15. The 212 Patent concerns pedometers and exercise monitoring devices. A pedometer or other exercise monitoring device is not a general purpose computer. At the time of invention, those working in the field knew that it would be useful for pedometers and other exercise monitoring devices to track various fitness-related activities, such as the distance travelled by a person wearing or otherwise carrying the device while travelling by foot.

However, although some exercise monitoring devices known at the time of invention could estimate distance travelled, they utilized many various designs to do so, with highly varying degrees of accuracy.

16. The designs claimed in the 212 Patent represent specific improvements to the exercise monitoring device itself – including, in Claims 2 and 5, a step counter and heart rate monitor joined to a strap used to releasably secure the exercise monitoring device to the user, and in Claim 6 a step counter, a transmitter, a mountable receiver, and a programmed data processor – as well as to the technological processes relied upon by such devices to estimate distance travelled.

17. With respect to foot travel, the length of a person's stride (stride length) generally varies with how many strides the person is taking over a given period of time (stride rate). Moreover, the relationship between stride length and stride rate itself varies from person to person. Improvements claimed in the 212 Patent resulted from the inventor conceiving of specific design configurations for pedometers and other exercise monitoring devices that could effectively utilize these relationships to improve the accuracy of distance calculations by enabling the device to efficiently account for changes in a user's pace during a workout without losing accuracy in distance calculation. For example, pedometers and other exercising monitoring devices claimed in the 212 Patent include data processors, step counters, transmitters, and receivers arranged and programmed in specific ways in order to apply the relationship between stride length and stride rate and to accommodate the varying nature of that relationship across individuals, and ultimately in order to improve accuracy. Pedometers and other exercising monitoring devices claimed in the 212 Patent optionally further include componentry for supporting, performing, and utilizing a calibration function that effectuates the inventor's

recognitions about variations in stride by analyzing input signals and performing calculations based on those signals.

18. Advantages for the user of pedometers embodying the claimed designs include convenience and accuracy. For the manufacturer, such advantages include lower costs of manufacturing.

Claim 6

19. Blackbird Technologies reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

20. Defendant has infringed literally and/or under the doctrine of equivalents one or more of the claims of the 212 Patent by making, using, importing, selling and/or offering to sell, in this judicial district and/or elsewhere in the United States, the TomTom Runner, Spark, and Multi-Sport watches, including cardio versions, which are covered by at least claim 6 of the 212 Patent. Subsequent references herein to these watches should be understood to include the corresponding cardio versions.

21. The Runner and Spark watches have the same hardware and software. Ex. 7 (Difference Between Runner and Spark web page). Accordingly, upon information and belief, documentation describing the design and operation of the Runner watch likewise describes the design and operation of the Spark watch, and *vice versa*.

22. The Runner, Spark and Multi-Sport watches are pedometers.

23. The Runner, Spark and Multi-Sport watches calculate the distance that the wearer has travelled on foot. Ex. 2 (TomTom Runner Watches web site); Ex. 4 (Multi-Sport Cardio specs); Ex 8 (TomTom Spark web site).

24. The Runner, Spark and Multi-Sport watches include a step counter.

25. For example, according to Defendant, the Runner, Spark and Multi-Sport watches, at least when used in a treadmill activity mode, “register[] the number of times [the wearer] swing[s] [his or her] arm back and forth and how quickly. This matches the number of strides.” Ex. 6 (TomTom Runner & Multi-Sport Reference Guide v. 1.8) at 18; Ex. 3 (GPS Watch Reference Guide) at 34.

26. The Runner, Spark and Multi-Sport watches also include a transmitter in communication with the step counter to generate a step count signal corresponding to each step and transmit the step count signal.

27. The Runner, Spark and Multi-Sport watches also include a receiver mountable on a user body portion to receive the step count signal transmitted from the transmitter.

28. For example, at least for “treadmill activities,” where GPS is not available and/or useful to determine distance travelled, the Runner, Spark and Multi-Sport watches use the step count to calculate the distance and pace of a user, therefore it must include a transmitter in communication with the step counter to generate a step count signal corresponding to each step and transmit the step count signal as well as a receiver to receive the step count signal transmitted from the transmitter. Ex. 3 (GPS Watch Reference Guide) at 34; Ex. 6 (TomTom Runner & Multi-Sport Reference Guide v. 1.8) at 18. The receiver is mountable on a user body portion, for example, a wrist. Ex. 2 (TomTom Runner Watches web site).

29. The watches further include a data processor programmed to calculate the distance travelled by the user by multiplying a number of steps counted by a stride length that varies according to a rate at which steps are taken.

30. For example, at least for “treadmill activities,” the Runner, Spark and Multi-Sport watches calculate the distance travelled by the user. One of Defendant’s instruction manuals

refers to “[t]he distance measurements your watch makes for Treadmill activities.” Ex. 3 (GPS Watch Reference Guide) at 34. Upon information and belief, the Runner, Spark and Multi-Sport watches make this distance calculation by multiplying a number of steps counted by a stride length that varies according to a rate at which steps are taken. This conclusion is evident, for instance, from the “calibration” feature on these watches.

31. According to TomTom, “[i]f [the user] calibrates [his or her] watch, the distance measurements for Treadmill activities become more accurate.” The calibration function involves entering the distance shown on a treadmill into the watch. In this manner, the distance measures made by the watch are “calibrated.” Ex. 3 (GPS Watch Reference Guide) at 34; Ex. 6 (TomTom Runner & Multi-Sport Reference Guide v. 1.8) at 18.

32. In general terms, calibration is a measurement technology that compares measured values to known values, and makes adjustments to the measurements to improve accuracy. One situation in which calibration is often helpful is when there are not yet many measurements and thus few measurements from which few conclusions if any may be drawn. In this regard, according to Defendant’s documentation, calibration is required on the watches at issue when the user “ha[s] done less than 6 calibrated runs.” Ex. 3 (GPS Watch Reference Guide) at 34; Ex. 6 (TomTom Runner & Multi-Sport Reference Guide v. 1.8) at 18. Stated otherwise, according to Defendant, the user must calibrate these watches the first six times they are used in treadmill activity mode. Calibration is required in other situations as well.

33. These watches calculate the distance travelled by the user by multiplying a number of steps counted by a stride length. According to Defendant, distance measurements during treadmill activities are based on two metrics, the number of strides taken and the length of those strides:

As you run on a treadmill, your watch registers the number of times you swing your arm back and forth and how quickly. This matches the number of strides you make as you run. Your watch uses your height to calculate the length of your stride, and from this the distance you have run....

Ex. 6 (TomTom Runner & Multi-Sport Reference Guide v. 1.8) at 18; Ex. 3 (GPS Watch Reference Guide) at 34. Prior to calibration – *i.e.*, before the device is ever used in treadmill activity mode – the device has no measurements pertaining to the user’s stride length. Accordingly, as the excerpt above states, the watch uses a “default” stride length, since taller people tend to take longer strides.

34. However, upon information and belief, once calibration commences, the watch updates or otherwise adjusts measurements to make them more accurate. Upon information and belief, because the stated purpose of calibration is to improve the watch’s distance measurements compared to known values, the calibration feature on the Runner, Spark and Multi-Sport watches adjusts certain measurements in order to make subsequent calculations based on them more accurate. As stated above, Defendant’s literature explains the relevant metrics in determining distance: step count and stride length. Upon information and belief, since step count is constant, only stride length may be updated or otherwise adjusted by calibration. This conclusion is bolstered by the fact that Defendant’s literature describes the calibration feature immediately after explaining that initial, pre-calibration distance determinations are made based on a stride length based on height, confirming that the purpose of calibration is determine a new stride length based at least in part on something else. In this manner, and based on Defendant’s documentation, the device adjusts the stride length for the particular user in question, compared to the default stride length determined solely by height.

35. In general, a person’s strides lengthen as the person runs faster and takes more steps more frequently. Upon information and belief, the calibration feature on the watches in

question takes account of stride lengths that vary according to a rate at which steps are taken. Two users having different stride rates running the same distance on a treadmill will enter the same distance into the calibration feature on the watch. Upon information and belief, the step counter is relatively accurate, and the watch will have counted fewer steps for the runner with the higher stride rate and more steps for the runner with the lower stride rate. This is so because, as mentioned, a person's strides lengthen as the person runs faster: A faster runner will generally cover the same distance in fewer steps than a slower runner. Even though both users entered the same distance into the calibration feature, the watch will determine different stride lengths for each user, since step count is constant and stride length is calibrated, taking account of how stride length varies with stride rate. As discussed further above, this customized or calibrated stride length is then used to calculate distance.

36. The Runner, Spark and Multi-Sport watches include a data processor that is further programmed to derive an actual stride length from a range of stride lengths calculated from a range of corresponding stride rates. Once at least one calibration procedure has been performed, the watch uses the calibrated stride length to calculate distance. In this manner, the Runner, Spark and Multi-Sport watches are configured to derive an actual stride length. In addition, as discussed above, according to Defendant's literature, the calibration procedure must be repeated multiple times. Further according to Defendant's literature, the repeated nature of the calibrations causes "the distance measurements to become more accurate" over time. In this way, the watches in question derive an actual stride length from a range of stride lengths calculated from a range of corresponding stride rates.

37. As such, at least claim 6 of the 212 Patent reads on the TomTom Runner, Spark and Multi-Sport watches, including the cardio versions.

Claims 2 and 5

38. Blackbird Technologies reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

39. Further, Defendant has infringed literally and/or under the doctrine of equivalents one or more of the claims of the 212 Patent by making, using, importing, selling and/or offering to sell, in this judicial district and/or elsewhere in the United States, the TomTom Runner, Spark, and Multi-Sport Cardio watches (collectively, “the Cardio Watches”), which are additionally covered by at least claims 2 and 5 of the 212 Patent.

40. The Cardio Watches are exercise monitoring devices.

41. The Cardio Watches include a strap for releasably securing the device to a user. Ex. 2 (TomTom Runner Watches web site); Ex. 4 (Multi-Sport Cardio specs); Ex 8 (TomTom Spark web site) p. 3.

42. On the Cardio Watches, both a step counter and a heart rate monitor are joined to the strap. Ex. 2 (TomTom Runner Watches web site); Ex. 5 (Teardown) at 2, 5; Ex. 4 (Multi-Sport Cardio specs) Ex 8 (TomTom Spark web site) p. 3-4. Regarding the step counter, see for example paragraph 25 above.

43. The Cardio Watches include a data processor programmed to calculate the distance travelled by the user by multiplying a number of steps counted by the step counter by a stride length that varies in accordance with a stride rate. Ex. 5 (Teardown) at 5; Ex. 3 (GPS Watch Reference Guide) at 34; Ex. 6 (TomTom Runner & Multi-Sport Reference Guide v. 1.8) at 18. For further information, see for example paragraphs 29-35 above.

44. The Cardio Watches include a data processor, wherein the stride length is determined with reference to a plurality of calibrations that each calculate a stride length as a

function of a known stride rate. For further information, see for example paragraph 36 above. In particular, as explained in paragraph 36 above, according to Defendant's literature, the calibration procedure must be repeated multiple times.

45. As such, at least claims 2 and 5 of the 212 Patent read on the cardio versions of the TomTom Runner, Spark, and Multi-Sport watches.

Induced Infringement

46. Blackbird Technologies reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

47. In addition, TomTom has actively induced infringement of the 212 Patent by instructing end users of the Runner, Spark, and Multi-Sport devices to use those devices. As explained above, these devices are covered by at least claims 2, 5 and 6 of the 212 Patent. Accordingly, end users' use of these devices is an act of direct infringement. TomTom actively induces this direct infringement by instructing and encouraging end users to use these devices, including the calibration feature described in detail above. For example, Defendant's literature instructs that "if you calibrate your watch, the distance measurements for Treadmill activities become more accurate" and providing instructions to calibrate the devices. Ex. 3 (GPS Watch Reference Guide) at 34; Ex. 6 (TomTom Runner & Multi-Sport Reference Guide v. 1.8) at 18. The devices themselves, designed by TomTom with their intended operation in mind, also encourage users to use the calibration feature above, including for example "reminder[s]" and "prompt[s]." Ex. 6 (TomTom Runner & Multi-Sport Reference Guide v. 1.8) at 18; Ex. 3 (GPS Watch Reference Guide) at 34. Defendant markets and otherwise touts the accuracy of the watches in question, which is based on an infringing design. Defendant actively induces these actions while knowing that the induced acts constitute infringement of the 212 Patent, which for

example has been detailed in both the original complaint and this amended complaint. Defendant has had actual knowledge of the 212 Patent since at least on or about August 15, 2016, when a copy of the original complaint as well as a copy of the 212 Patent were provided to Defendant via letter correspondence and, since that time, has been aware that the Runner and Multi-Sport devices infringe the 212 Patent. Accordingly, since at least that time and upon information and belief, TomTom has specifically intended its customers to infringe the 212 Patent and has known that its customers' acts constitute infringement.

Willful Infringement

48. Blackbird Technologies reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

49. Defendant's infringement of at least claims 2, 5 and 6 of the 212 Patent has been and continues to be willful. Defendant has had notice of the 212 Patent since at least on or about August 15, 2016, when a copy of the original complaint as well as a copy of the 212 Patent were provided to Defendant via letter correspondence and, since at least that time, has had knowledge of the objectively high likelihood of infringement.

Damages

50. Blackbird Technologies reasserts and incorporates herein by reference the allegations of all preceding paragraphs of this Complaint as if fully set forth herein.

51. Blackbird Technologies is informed and believes, and on that basis alleges, that Defendant gained profits by virtue of its infringement of the 212 Patent.

52. Blackbird Technologies has sustained damages as a direct and proximate result of Defendant's infringement of the 212 Patent.

53. As a consequence of Defendant's infringement of the 212 Patent, Blackbird Technologies is entitled to recovery of damages in the form of, at a minimum, a reasonable royalty.

54. As a consequence of Defendant's willful infringement of the 212 Patent, Blackbird Technologies is entitled to enhanced damages pursuant to 35 U.S.C. § 284.

PRAYER FOR RELIEF

WHEREFORE, Blackbird Technologies respectfully requests that this Court enter judgment against Defendant, as follows:

- A. Adjudging that the 212 Patent is valid and enforceable;
- B. Adjudging that Defendant has infringed one or more claims of the 212 Patent, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271;
- C. An award of damages to be paid by Defendant adequate to compensate Blackbird Technologies for its past infringement and any continuing or future infringement up until the date such judgment is entered, and in no event less than a reasonable royalty, including interest, costs, and disbursements as justified under 35 U.S.C. § 284 and, if necessary to adequately compensate Blackbird Technologies for Defendant's infringement, an accounting of all infringing sales including, but not limited to, those sales not presented at trial;
- D. Ordering Defendant to continue to pay royalties to Blackbird Technologies for any continuing or future infringement of the 212 Patent on a going-forward basis;
- E. Awarding Blackbird Technologies pre-judgment and post-judgment interest at the maximum rate permitted by law on its damages;
- F. Awarding Blackbird Technologies enhanced and/or treble damages pursuant to 35 U.S.C. § 284; and

G. Blackbird Technologies be granted such further relief as this Court deems just and proper under the circumstances.

DEMAND FOR JURY TRIAL

Blackbird Technologies demands a trial by jury on all claims and issues so triable.

Dated: November 14, 2016

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