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(54) Title: COMPUTERIZED DECISION SUPPORT TOOL AND MEDICAL DEVICE FOR SCRATCH DETECTION AND FLARE PREDICTION

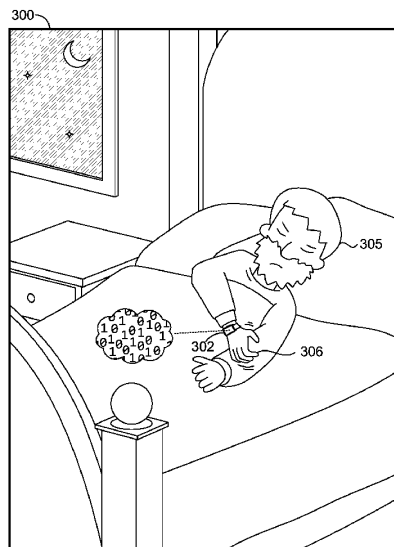


FIG. 3A

(57) Abstract: Technology is disclosed for detecting scratch events and pre-
dicting flares of pruritus, utilizing motion data sensed from a wearable sensor.
Detecting scratch may be done with a two-tier approach by first detecting a
hand motion from motion sensed data and then classifying that hand motion as
a scratch event using one or more computerized classification models. Embod-
iments may focus on detecting nighttime scratch by utilizing motion sensed da-
ta captured during a user's detected sleep opportunity. Additionally, historical
scratch event data may be used to predict a user's itch and flare risk for a future
time interval. Decision support tools in the form of computer applications or
services may utilize the detected scratch events or predicted itch or flare risk
to initiate an action for reducing current itch and/or mitigating future risk, in-
cluding initiating a treatment protocol that includes therapeutic agent.

[Continued on next page]

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- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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