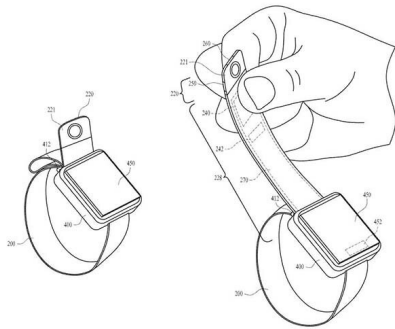


# Camera joins Apple band in patent for smartwatch

26 June 2019, by Nancy Cohen



Credit: United States Patent 10,331,083

Camera at the end of a smartwatch strap, anyone? It is being suggested as a way to overcome some hurdles in smartwatch picture-taking.

Ben Lovejoy, *9to5Mac*, spelled out a hurdle to the idea of a watch-camera. He said the problem was obvious: "How do you give people the freedom to [frame](#) the photo as they wish, while still allowing them to see the image on the display of the Watch?"

Jon Fingas in *Engadget* reported Tuesday on an idea tried before, but at the time seeming problematic—a camera sitting on the watch strap—but in a fixed position such that the person has to move the wrist in a such a way to get the proper shot.

Well, patent news has it that Apple can address both hurdles—camera in a watch and camera on the band—via a [patent application](#), "Watch band with optical sensor," which was filed back in September 2016, reported on Tuesday.

*PetaPixel* was one of a number of sites taking notice of the concept that addressed wrist

movement: "unlike other bands with built-in cameras, this new Apple design allows the [wearer](#) to point the camera in all kinds of directions without having to bend the wrist."

The patent explored its answer to challenges posed with the idea of a smartwatch with a camera. The authors recognized a camera rigidly mounted to a watch body or rigidly mounted to a watch band may force a user into "uncomfortable and awkward positions to angle the camera's optical sensor or lens to capture a desired image or video."

According to the patent:

"A user's arm may also become fatigued when trying to record a video from the smartwatch's rigidly mounted camera if the user's arm must be held in such a position for a significant amount of time to record the video. Additionally, by angling the smartwatch to aim its optical sensor, a user may be unable to see an image or video displayed on the smartwatch's display screen in the moment of capture in situations where the user must awkwardly aim the watch body at the desired target."

This time, though, the built-in camera carries flexibility. How it would work: an extended segment with a camera on the end would have you pull, retract and twist to capture your shot, said Fingas.

Lovejoy also explained how this would help in picture-taking: "You'd be able to pull out a section of the band, which would be flexible so you can angle it as desired. The lens itself would rotate on the end of the band for complete flexibility."

The abstract described the band as flexible. The user may manipulate it; the display functions as the viewfinder for the optical sensor.

"There would be a number of ways to set off the cameras, too, including pinching the band, pressing

a button on the band or [tapping](#) the screen," said *Engadget's* Fingas.

The patent discussion included the possibility of multiple optical sensors, suggesting that a future Apple Watch band could have both front and rear cameras, allowing users to switch between views. Here is where the Apple concept gets especially interesting.

Michael Zhang in *PetaPixel*: "Having the camera on a loose end would also allow Apple to place a camera on each side of the band, opening the door to things like 360-degree photos and videos."

One question that came up was if the capability of capturing images and video with a smartwatch band camera would result in users relying less frequently on their smartphones?

Reader comments in *9to5Mac* included: 1. "Do you even hear yourself?" and 2. "I find the watch screen too small to really frame and get the perfect picture." Another: 3. "The answer to this problem is that there is no problem...Who wants a camera on their watch anyway??"

And now, to revisit the standard paragraph from new sites to say that not all patents come to life and this one might collect dust. Still, Fingas found some reason not to be surprised if Apple does do something with this patent concept.

His reasoning is that "let's not forget that Apple is clearly eager to make its smartwatch independent of the iPhone."

Joe Rossignol's examination of the patent in *MacRumors*: The [patent](#) "describes an Apple Watch band with a camera or [optical sensor](#) affixed to the end of it. This would enable the Apple Watch to capture photos and video, with the Apple Watch's display serving as the viewfinder."

He said, "A camera on the Apple Watch could enable basic photo capturing and FaceTime calls on the [wrist](#)."

Rossignol noticed how illustrations of how the [band](#) and camera could be positioned included one

where the [camera](#) hovers just above the Apple Watch's display.

**More information:** Watch band with optical sensor, [United States Patent 10,331,083](#)

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