

# Google patent talk: laptop hinge and auto-align display convenience

30 November 2017, by Nancy Owano

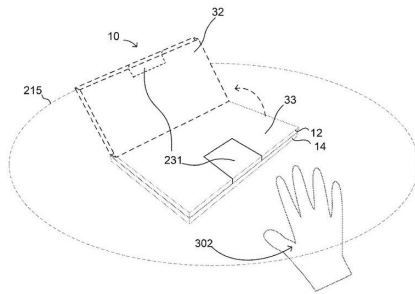


FIG. 4

Credit: United States Patent 9,823,631

(Tech Xplore)—Google-patent news this week is all about its patent application first filed back in 2013 calling for a motorized laptop hinge. That is where you have the luxury of opening and closing your little machine with the touch of a finger. You also get a display that auto-aligns with your face.

So what does that mean to you, having a [laptop](#) with a motorized screen? Chaim Gartenberg in *The Verge*: the screen could automatically lift up your display when you tap the lid. He described it as "a [magical](#) world where laptop users are freed from the tyranny of having to engage in physical effort to use their computers."

Tyler Lee in *Ubergizmo* said the [patent](#) talk discussed a hinge allowing a laptop to open [up](#) when the user is nearby or when the user touches the laptop itself.

While one can laugh at the amount of sweat and toil saved from having to open and shut a lid (like, really), a practical advantage might be said for those with physical limitations, where a simple touch could be useful.

Tech watchers got busy this week looking over the

patent wording to see what Google is talking about and to assess the possibility that the concept might actually see the light of day.

While site writers hasten to include the much-repeated reminder that not all patents materialize into real products, many saw a possibility in this taking shape as a motorized Pixelbook lid.

How would the hinge structure work? It would work via a "plurality of sensors," said *Patently Apple*.

"The movement of the lid is based on input from a plurality of sensors. One sensor may be configured to determine whether the user is within a predetermined threshold distance. Another [sensor](#) may be capable of detecting whether the user has made direct contact with the laptop. In one embodiment, the computer may have an image sensor configured to detect the user's face and continuously adjust the angle and position of the lid to keep the face in the field of view of the camera and/or keep the lid in the optimum viewing position."

Beyond the lid-opening concept, it was the other feature that grabbed attention this week, the ability to track the user's face "and auto-adjust the display angle for perfect viewing," said *Patently Apple*.

Oliver Cragg in *Android Authority* described "a series of ambient light and camera sensors that track the user's face."

Theoretically, he said, the laptop could "adjust its display based on the user's position. That's right, you might one day own a laptop that follows your head [movements](#)."

The patent filed back in October 2013 is titled "Notebook computer with motorized display positioning." The two inventors named in the patent filing were Kenneth Loo and Kenneth McAlpine.

Providing some background, *9to5Google* said, "The patent, first spotted by Patently Apple, was first filed back in 2013 by Google and Ken Loo, Senior Product Design Engineer who worked on the self-driving car project, the Pixel smartphones, and the Pixelbook."

*9to5Google's* Justin Duino: "A new patent just granted to Google, though, is [something](#) we could actually envision coming to a Chromebook or Pixelbook in the future."

Will hinge-tech come to Pixelbook? Could we see this motorized hinge in an upcoming Pixelbook 2?

A tie-in with Pixelbook was frequently mentioned by tech watchers. First the inexpensive Chromebook was introduced by Google and then they introduced their new aluminum-glass crafted Pixelbook "which is for the higher end of the market that may appeal to students graduating from K12 and going on to University," said *Patently Apple*.

European Editor for *Android Authority*, Oliver Cragg had a word or two about the role hinges play in laptop ergonomics, a factor that Google is aware of too. He wrote, "you have to admit that it is oddly satisfying when you lift up a laptop lid in one smooth, slick motion courtesy of a well-designed [hinge](#)."

He said Google already nailed this feel with the Pixelbook. "The premium Chromebook's 360-degree hinges feel just right when flipping between laptop and tablet modes."

He added, "With all this in mind, it's not that surprising to hear that Google has had hinge-based innovation on its mind for quite some time."

**More information:** Notebook computer with motorized display positioning, [United States Patent 9,823,631](#)

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