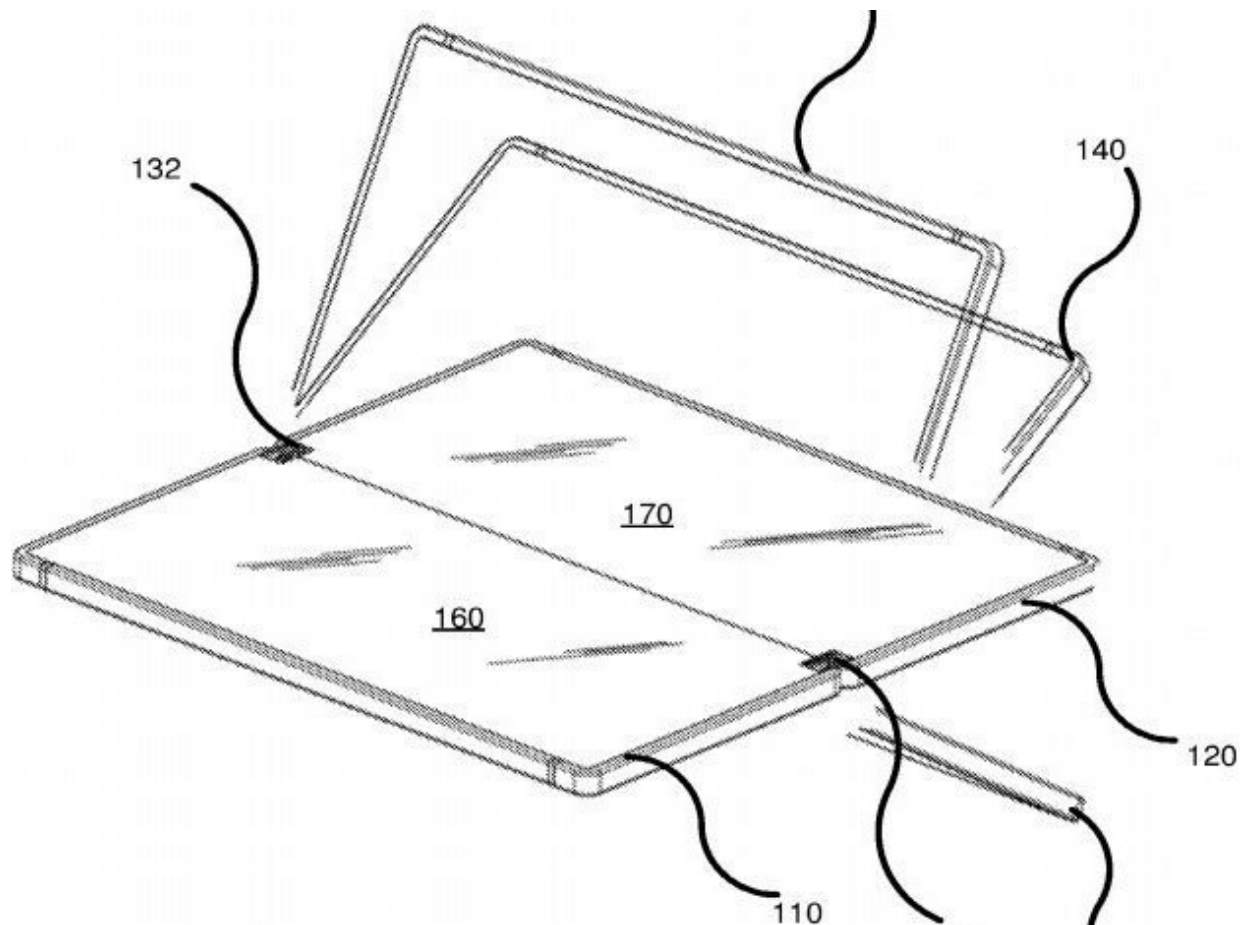


A 360-degree rotation hinge design teases hopes for Microsoft phone win in 2018

December 28 2017, by Nancy Owano



Credit: Patent PCT/US2017/036256

Remember when Microsoft was actually aspiring to be mobile phone

players? It seems like yesterday—but actually it was not so long ago. With the rise of the iPhone and flashy Android launches, the world got used to unsightly stats showing the Windows Phone dip.

While its drop of market share became evident, there is keen interest in whether or not Microsoft has ambitions as a comeback kid, not with a Windows Phone but with something now being rumored by watchers as a "Surface Phone".

That probably explains why the "Hinge with free-stop function" [patent](#) filed this year has drawn a lot of interest among tech watchers when it surfaced on the World Intellectual Property Organization (WIPO) website.

Namely, this is where Microsoft proposes a smartphone with a special hinge design to accommodate a dual [display](#). The application is titled "Hinge with free-stop function." First off, Microsoft presents a case for why a dual-display [phone](#) makes special sense in the current marketplace and, having said that, why we need a hinge rethink.

Hinges that are made for dual-display devices can be problematic: (1) bulky hinges that protrude when the mobile devices are switched to different positions and (2) an inability to accommodate very thin displays.

The patent application discussed this, saying hinges may protrude from the [device](#) as it switches between positions. "As devices continually become thinner, hinges need to be adapted to accommodate the thinner displays without further protrusion from the back of the device as it is opened and closed."

Other problems were described as "excess slack" making two displays feel loosely connected.

FIG. 2A

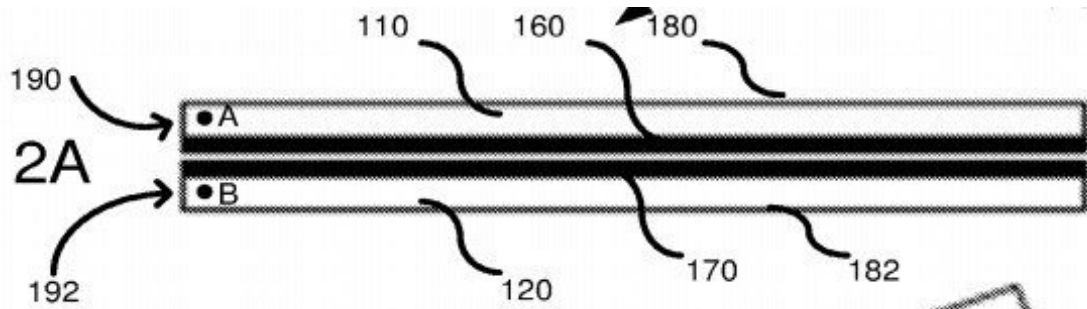


FIG. 2B

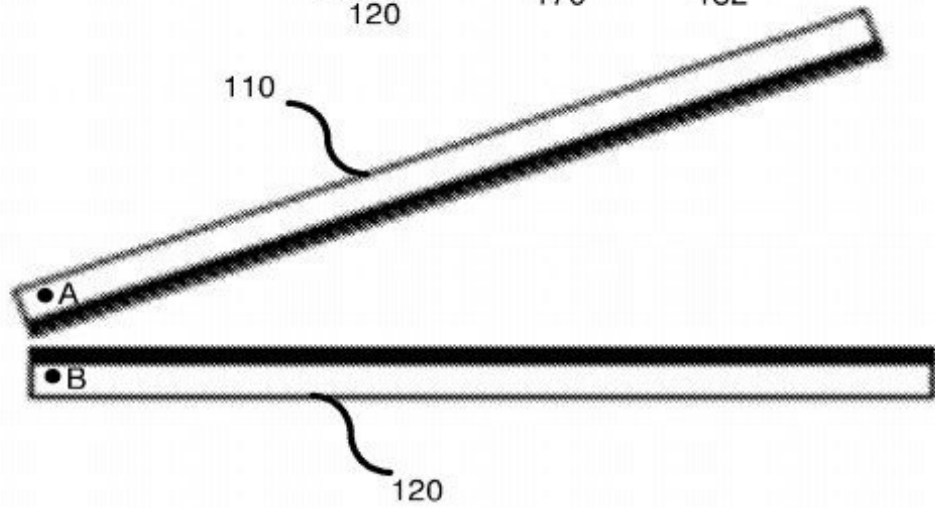


FIG. 2C

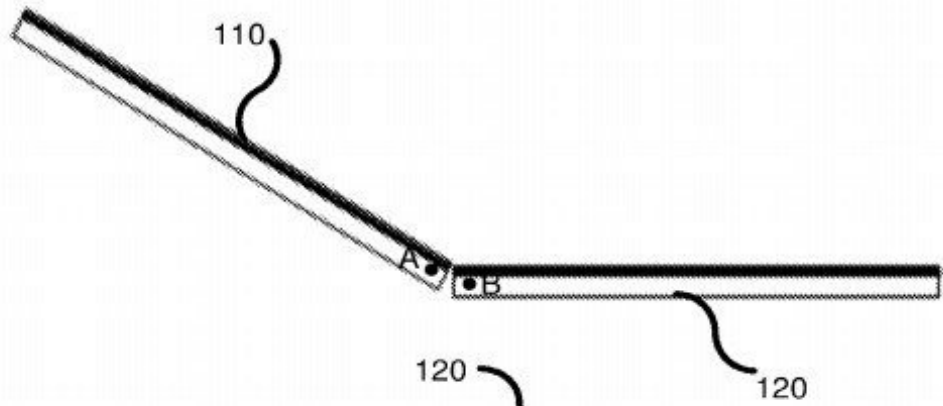


FIG. 2D

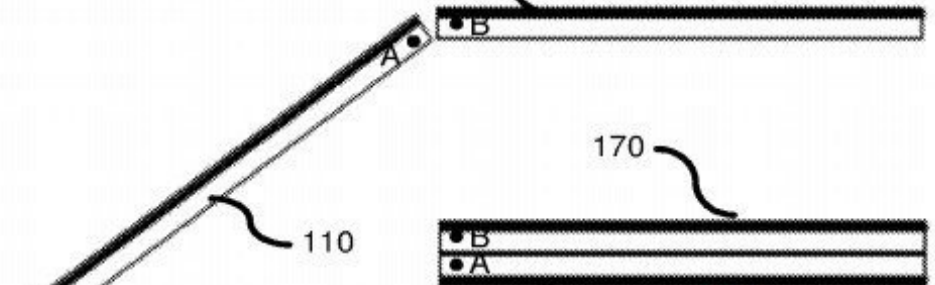
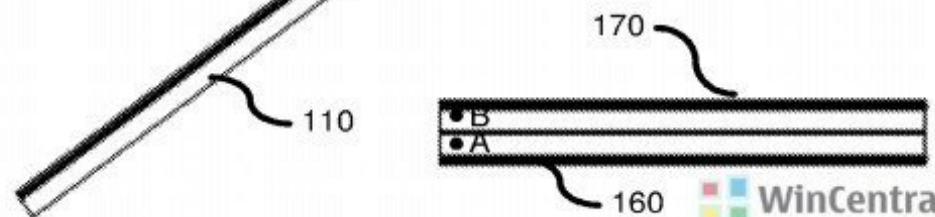


FIG. 2E



Credit: Patent PCT/US2017/036256

Microsoft's hinge idea features a 360-degree rotation of the dual-displays. So fundamentally this patent talk about the proposed hinge would translate into users being able to take their phones and use two screens for working, and at any angle. (When laid flat, noted Matt Weinberger, *Business Insider*, it could act as one [big](#) screen. But you could also fold it up to use like a tiny little laptop.)

"With a dual-display device, the mobile phone or tablet can include an open, expanded position where both displays are flush so that the user feels like there is a single integrated display. In a closed, condensed position, both displays are face-to-face so as to protect the displays. In a fully-open position, the dual displays can sit back-to-back so the user needs to flip the device to view the opposing display," according to the patent text.

Note the title of the patent includes the phrase "free-stop function." What does that mean? Mike Luces, *International Business Times*, said with the free-stop feature, users could "freely [stop](#) the device in any position through the 360-degree rotation."

While most patent news items emphasize these are concepts that may never see the light of day in real products, what is so interesting about this hinge patent is that it seems to make writers more certain that Microsoft has a phone in mind sooner than later. The talk centers on a Surface Phone. Tech watchers ponder whether this is a sign that we might see Microsoft entering a foldable "Surface Phone" in 2018.

WinCentral: "The [ultimate](#) mobile device from Microsoft is nearing its development with latest patents revealing the near-final details of the foldable Surface Mobile/Phone Andromeda device." Nayan of *WinCentral* wrote that "Now a recent Microsoft patent goes deeper into the details of the free-stop hinge mechanism that will enable 360-deg rotation of the dual-displays of the Surface Andromeda device."

Alex Cranz back in May this year in *Gizmodo*: "Microsoft not only has to make a [great](#) phone, it has to be a disruptive one—and there's no clear path to such a device apparent in the stable of phones on the market. In other words, Microsoft needs to blow our collective minds."

The hinge patent is one more tease for those who anticipate something very fresh in a Microsoft smartphone for 2018.

More information: [HINGE WITH FREE-STOP FUNCTION, PCT/US2017/036256](#)

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