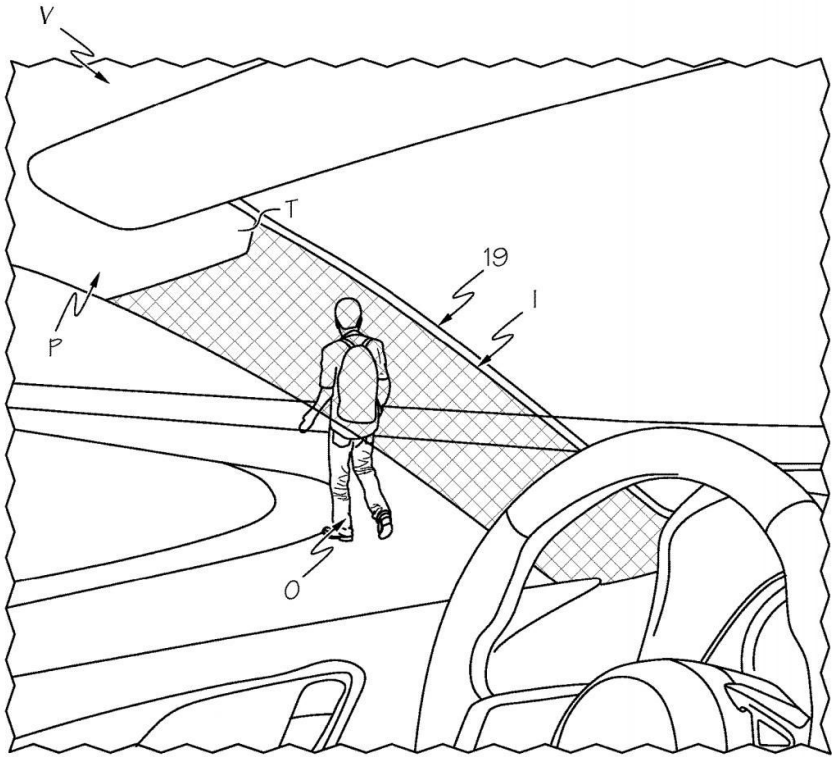


# Patent talk: Making car pillars seem transparent explored by Toyota

August 17 2017, by Nancy Owano



Credit: United States Application US20170227781

(Tech Xplore)—Big pillars may be a safety benefit for cars but what about driver visibility? "Since cars were first invented in 1886, the A-pillars have become wider, to help protect the cars in the instance of a

[crash](#). But this had made visibility for drivers more difficult," said Shivali Best in *Daily Mail*.

Toyota may have come up with a fine solution in the form of a [patent](#) filed last year and published earlier this month. Toyota has a cloaking device concept. The system being proposed would give the driver an unobstructed 360-degree view.

Pillars are the vertical or near-vertical supports of the window area. The A-pillars hold either side of the windshield in place.

The name of the patent is "Apparatuses and methods for making an object appear transparent." This involved the A-pillars on the sides of the windshield.

Let Andrew Krok in CNET explain: "Being able to see 'through' (it's more like 'around') the A-pillar without craning your neck every which way could greatly benefit pedestrian [safety](#)."

Erci Brandt, *The Drive*, said on Tuesday, "Cleverly placed mirrors can bend light around an [object](#) making it visible from the other side. So you're not really seeing through the pillars, you're seeing around them."

Interestingly, in March, *Design News* carried an article where Toyota's Minjuan Zhang demonstrated the invisibility cloak. Senior Technical Editor Charles Murray was looking at engineers working on auto industry projects and it had a photograph of Zhang. Such an "[invisibility cloak](#)" involved mirrors and polarizing lenses. "The technology builds on similar research by other [scientists](#) but also adds dimensions never seen previously." Murray said that "The end result is that viewers believe they are seeing right through visual obstructions."

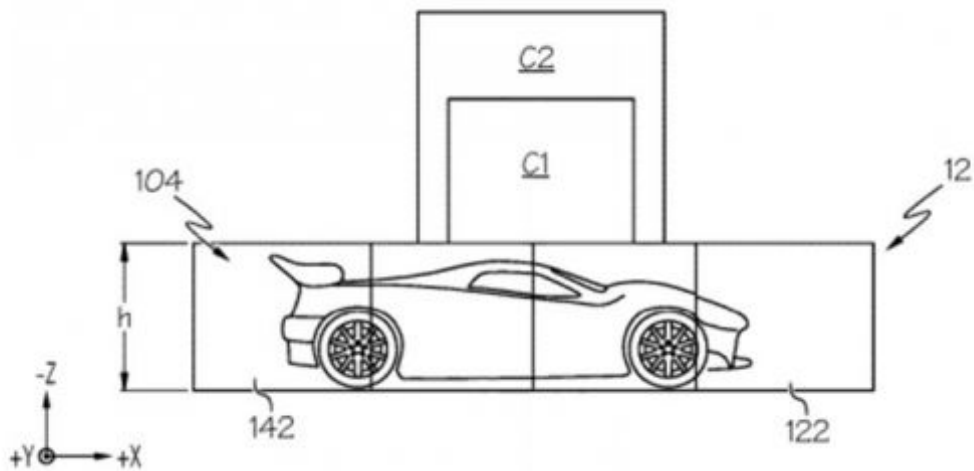


FIG. 7

Credit: United States Application US20170227781

So good idea? Reader comments on news stories about the patent filing appeared largely positive.

Meanwhile, Brandt in *The Drive* remarked that it was a "cheaper option than adding more cameras and screens all over the place."

Stephen Edelstein in *Digital Trends* weighed in too. "Just as cars have gotten harder to see out of, they have sprouted a dizzying array of backup cameras, park-assist systems, and other tech meant to keep drivers from running into things. These systems can be pretty effective, but simply being able to see where you are going is probably the best [answer](#)."

Could we ever expect this to materialize and if so, where?

It is unclear when, or if, Toyota plans to implement the system in its cars, said *Daily Mail*.

Brandt said, "The patent was filed with the U.S. patent office by Toyota North America, so if Toyota does go forward with this technology, we can probably expect to see it in cars in the U.S."

**More information:** Apparatuses and methods for making an object appear transparent, [United States Application US20170227781](#)

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