

The ‘Ghost Gun’ Linked to Luigi Mangione Shows Just How Far 3D-Printed Weapons Have Come

Andy Greenberg : 7-8 minutes : 12/10/2024

More than a decade after the advent of the 3D-printed gun as an icon of libertarianism and a gun control nightmare, police say one of those homemade plastic weapons has now been found in the hands of perhaps the world’s most high-profile alleged killer. For the community of DIY gunsmiths who have [spent years honing](#) those printable firearm models, in fact, the handgun police claim Luigi Mangione used to [fatally shoot UnitedHealthcare CEO Brian Thompson](#) is as recognizable as the now-famous alleged shooter himself—and shows just how practical and lethal those weapons have become.

In the 24 hours since police released a photo of what they say is Mangione’s gun following the 26-year-old’s arrest Monday, the online community devoted to 3D-printed firearms has been quick to identify the suspected murder weapon as a particular model of printable “ghost gun”—a homemade weapon with no serial number, created by assembling a mix of commercial and DIY parts. The gun appears to be a Chairmanwon V1, a tweak of a popular partially 3D-printed Glock-style design known as the FMDA 19.2—an acronym that stands for the libertarian slogan “Free Men Don’t Ask.”

The FMDA 19.2, released in 2021, is a relatively old model by 3D-printed-gun standards, says one gunsmith who goes by the first name John and the online handle Mr. Snow Makes. But it’s one of the most well-known and well-tested printable ghost gun designs, he says. The Chairmanwon V1 remix that police say Mangione had in his possession when he was arrested in a Altoona, Pennsylvania McDonald’s varies from that original FMDA 19.2 design only in that another amateur gunsmith, who goes by the pseudonym Chairmanwon, added a different texture to the gun’s grip.

“For someone who has been building firearms like this for five years, it’s a bit of an odd choice. We’ve been building nicer models,” says Mr. Snow Makes, who hosts an annual ghost gun shooting competition. But he adds that “this is one of the earliest 3D-print Glock styles that was widely tested and successful at creating a reliably functional firearm.”

Authorities in New York charged Mangione on Monday in the December 4 murder of Thompson, alongside weapons charges and other alleged offenses in Pennsylvania. A [handwritten “manifesto”](#) police say they found on Mangione’s person upon his arrest laments UnitedHealthcare’s practices and the US health insurance industry more broadly. Bullet casings discovered at the scene of the shooting outside the New York Hilton Midtown hotel in Manhattan were reportedly emblazoned with the words “deny,” “defend,” “depose”—likely criticisms of health care industry practices.

The fact that even a relatively old model of 3D-printed firearm allegedly allowed Mangione to shoot Thompson repeatedly on a Manhattan street—certainly the most high-profile shooting ever committed with a ghost gun or a 3D-printed weapon—shows how far DIY weapons tech has come, says Cody Wilson, the founder of the gun rights group Defense Distributed. Unlike the earliest 3D-printed gun models, the FMDA 19.2 can be fired hundreds or even thousands of times without its plastic components breaking.

“It just speaks to the ease with which you can do this,” says Wilson. “He doesn’t have to be an expert at 3D-printed guns or shooting, and it all works.”

Despite its simple description by law enforcement and others as a “3D-printed pistol,” the FMDA 19.2 is only partially 3D printed. That makes it fundamentally different from fully 3D-printed guns like the “Liberator,” the original one-shot, 3D-printed pistol Wilson debuted in 2013.

Instead, firearms built from designs like the FMDA 19.2 are assembled from a combination of commercially produced parts like barrels, slides, and magazines—sometimes sold in kits—and a homemade frame. Because that frame—often referred to as a “lower receiver” or “lower”—is the regulated body of the gun, 3D-printing that piece or otherwise creating it at home allows DIY gunmakers to skirt gun-control laws and [build ghost guns](#) with no serial number, obtained with no background check or waiting period.

The FMDA 19.2 model, released by a group originally known as Deterrence Dispensed—a gun-building group initially inspired by Wilson’s Defense Distributed but now widely seen as a rival—was distinguished by its use of commercially available “rails,” the metal components that guide the upper part of the gun known as its slide, which retracts with every shot, resetting the trigger and loading a new round into the chamber. (In a widely circulated video of Thompson’s murder, the gun allegedly fired by Mangione appears not to have functioned as a semiautomatic. That’s a result of the suppressor attachment preventing its re-chambering mechanism, gunsmiths say.)

The FMDA 19.2’s relatively simple tweak—the use of commercially produced metal rails instead of homemade ones—led the gun model to be considered the most practical and reliable 3D-printed Glock design available at the time it was released three years ago. “There had been earlier Glock-style pistols, but the interior rail components were not as refined,” says Mr. Snow Makes. “It’s kind of that perfect blend of 3D-printed frame and precision rails.”

Deterrence Dispensed, the group behind that FMDA 19.2 design, has since rebranded under the name “the Gatalog.” But the group’s original website still bears the libertarian gun rights slogans that summarize its ideology. “All individuals are entitled to the utility to defend their humanity,” the site reads. “Gun control has failed. You can’t stop the signal.”

A founder of Deterrence Dispensed who went by the name Jstark, later [revealed](#) to be a now-deceased German man named Jakob Duygu, was featured in a 2020 [Popular Front](#) documentary wearing a black balaclava and sunglasses. “We want people to have freedom of speech and the right to bear arms,” he says in the film. “If that’s too politically extreme for you, fuck yourself.”

Just two months ago, one Bergen, New York, man who allegedly acted as an administrator for the Gatalog named Peter Celentano was [arrested and charged](#) with illegal ownership of two machine guns and numerous 3D-printed and other homemade handgun and AR-15 components.

Exactly why Mangione allegedly used a 3D-printed gun in the killing of UnitedHealthcare’s Thompson—whether as a political statement or in the belief that it would help him evade identification—remains far from clear. But as a coder and technologist, he may have been attracted to the idea. “This is the US. It’s not the easiest way to get your hands on a gun,” says another DIY gunsmith who spoke to WIRED but asked not to be named, in reference to 3D-printed firearms. “But he’s a techy guy, and he may have just owned a 3D printer. It wouldn’t be a bad way to make an untraceable gun.”