

No. 23-852

In the

Supreme Court of the United States

MERRICK B. GARLAND, ATTORNEY GENERAL, ET AL.,
Petitioners,

v.

JENNIFER VANDERSTOK, ET AL.,
Respondents.

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

**BRIEF OF FORMER ACTING CHIEF OF ATF
FIREARMS TECHNOLOGY BRANCH RICK
VASQUEZ AND CENTER FOR HUMAN LIBERTY
AS AMICI CURIAE IN SUPPORT OF
RESPONDENTS**

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INTEREST OF *AMICI CURIAE*¹

Rick Vasquez is the former Acting Chief of the Bureau of Alcohol, Tobacco, Firearms and Explosives' Firearms Technology Branch (FTB). Before joining ATF, Vasquez served in the United States Marine Corps for 21 years; among other duties, he worked as a gunsmith at the precision weapons shop in Quantico, Virginia. He served as a gunsmith and firearms instructor for the United States Department of State. Thereafter, from 1999 to 2014, he served as a Firearms Enforcement Officer in the FTB, the division that makes determinations whether castings that can be manufactured into firearms themselves constitute "firearms" under the Gun Control Act. In 2004, he was selected as the FTB's Assistant Branch Chief, and from 2008 to 2010, he held the Acting Chief and the Assistant Chief position. He reviewed and approved hundreds of such determinations, the majority of which related to the manufacturing of receivers for AR-style firearms. He also wrote the first Standard Operating Procedures for the FTB, wrote firearms rulings, prepared firearms briefs for Congress, developed firearms identification courses, and reviewed all ATF firearms rulings issued by the FTB during his tenure. He was awarded ATF's Distinguished Service Medal. After leaving ATF and forming

¹ Pursuant to Supreme Court Rule 37.6, *amici* affirm that no counsel for a party authored this brief in whole or in part, and that no person or entity other than *amici* and their counsel made a monetary contribution intended to fund the preparation or submission of this brief.

Rick Vasquez Firearms, LLC, he has reviewed castings and other items (including arm braces) and made submissions to ATF on behalf of manufacturers. He has a strong interest in consistent application of the Nation’s firearms laws, particularly as they relate to private gunsmithing.

The Center for Human Liberty is a nonprofit organization dedicated to defending and advancing individual liberty and freedom, including the rights and liberties protected by the Constitution. Consistent with this purpose, the Center for Human Liberty engages in legal efforts, including the submission of amicus briefs, to promote the protection of liberty. The Center is interested in this case to ensure that the federal government’s regulation of private firearm manufacturing is consistent with the original meaning of the Gun Control Act and the Second Amendment as the Framers understood it.

SUMMARY OF ARGUMENT

The government begins its defense of the Rule at issue here by asserting that so-called “[g]host guns could be made from kits and parts that were widely available online and allowed anyone with basic tools and rudimentary skills to assemble a fully functional firearm in as little as twenty minutes.” Pet. Br. 2. The government’s brief repeats a version of this mantra no fewer than six times. *See, e.g., id.* at 7 (parts kits “allow anyone with basic tools to assemble a functional firearm ‘quickly and easily’—often, in a matter of minutes”) (citing 87 Fed. Reg. at 24,652).

The purpose of this amicus brief is to explain how those assertions are wrong. In reality, not just “anyone” with “basic tools” and “rudimentary skills” can take a

parts kit and assemble a “fully functional firearm” at all, let alone in a “matter of minutes.” Even assuming the hypothetical “anyone” had the tools needed to construct a firearm, they also need a level of skill, patience, and determination that eludes most non-experts.

In Part I below, we discuss the process of building a Glock-style semiautomatic from a parts kit. The government focuses on the Polymer80 parts kit for a Glock-style semiautomatic pistol—generally regarded as one of the least complicated kits from which to assemble a complete firearm—yet it fails to explain the supposedly simple process. We set out a step-by-step summary of building a functioning firearm from a parts kit. On their first attempt, non-experts are frequently unable to even get their firearms to work after many hours of frustration. Many beginners don’t know where to start.

But don’t take our word for it. At multiple points along the way, we include the account of a frustrated writer who could not complete the task on his own. In an article conceived as an exposé about the supposed ease of building a “ghost gun” at home, the journalist admitted that he could not begin to do the work and had to enlist the help of two different experts. The real-life experiences of non-experts clash with the government’s narrative, because that narrative is wrong.

Part II explains that building AR-15-style firearms from parts kits, which are also banned by the Rule, is a far more difficult task than building Glock-style handguns. Machining the fire control cavity of a lower receiver in particular is a painstaking process that demands precision and requires technical expertise with uncommon tools.

This is doubtless why the government essentially ignored this huge segment of the market affected by the Rule.

* * *

To be sure, firearms experts with ample experience and knowledge of how guns operate can use hand tools to quickly build a firearm. But the Rule is not concerned with such experts. As the government makes clear, the concern underlying the Rule is that “anyone” can supposedly build a gun by themselves with tools that members of the general public supposedly have on hand. It is critical to emphasize that, when faced with the reality that novices struggle to build firearms, there can be no argument in response that novices may simply be paying experts a few dollars to do the job for them. Any such paid assistance would be a federal crime: unless the expert is federally licensed, he is engaged in unlawful “manufacturing” under 18 U.S.C. § 923(a), and he would be subject to fines, imprisonment, or both. 18 U.S.C. § 924; *see* 18 U.S.C. §§ 921(a)(10), (a)(21)(A), (a)(22); *see also* 27 C.F.R. § 478.11 (defining “manufacturer” as “[a]ny person engaged in the business of manufacturing firearms or ammunition,” which “include[s] any person who engages in such business on a part-time basis”).

Thus, the attention here must be squarely focused on the novice builder, whom the government mistakenly asserts will face no difficulty building their own firearm.

ARGUMENT

I. Building A Glock-Style Semiautomatic Firearm.

The government would have the Court believe that building a handgun from a parts kit involves about as much time and skill as a children's paint-by-numbers set. That message is wrong.

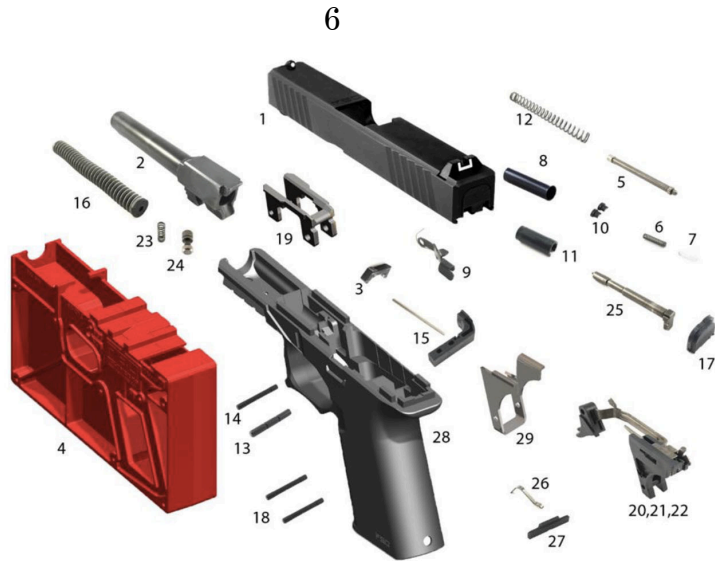
A. Getting Started: Parts And Tools.

Parts. A robust Glock-style parts kit typically includes the following parts needed to build a frame:

- A plastic jig that holds the frame precursor in place;
- The frame precursor;
- Front and rear rail modules that hold other parts in place and provide the surface on which the slide travels;
- Drill bits for drilling the trigger mechanism housing pin hole and trigger pin hole; and
- Pins to hold the trigger mechanism and block rail in place.

See, e.g., J.A. 165 (Polymer80 Instruction Manual).

A frame cannot shoot a bullet, however. As the Joint Appendix demonstrates, a builder needs upwards of 24 *additional* parts that themselves need to be assembled and installed into the frame before the finished product is a functioning firearm:



J.A. 186.

The additional parts necessary to build a functioning firearm (most notably, the remaining frame components, including the trigger bar assembly, which cost \$50–\$100; and the slide assembly, which can cost upwards of \$300 or more) are sold online and through firearms dealers and other retailers.² The Polymer80 in particular is designed to be compatible with “third generation” (Gen 3) Glock components, such that the parts are interchangeable.

² Polymer80 no longer offers for sale the “Buy Build Shoot Kit,” which included all of the basic component parts necessary to build a functional semiautomatic pistol for approximately \$600.

Nevertheless, different suppliers provide different instructions and sometimes use different terminology for their parts.

Tools. The government’s brief never specifies what it means when it says the hypothetical novice only needs tools that are “common” (e.g., at 10, 11, 17, 18, and elsewhere), “basic” (at 7, 10, and 36), or “standard” (at 37), to build a functioning firearm. The instruction manual in the Joint Appendix recommends the following list of tools:

- Hand drill;
- Bench vise to hold the jig in place for drilling pin holes;
- Cross slide vise to hold the lower in place during milling;
- Drill press and drill press vise to accomplish rough milling of the tabs and barrel block area;
- Sandpaper, hand files, and a Dremel tool with a fine sanding wheel to fine-tune the milled areas into a smooth surface;
- Small hammer and punch; and
- Long needle nose pliers.

J.A. 168, 181.

In addition, the milling requires use of protective eye-wear. Builders typically use a can of compressed air to remove the particles that accumulate in the cavity during the milling process. It is also generally recommended that a lubricant be applied so the slide can function properly. *E.g.*, J.A. 184.

While the avid gun-building enthusiast may have found it worthwhile to invest in these tools and materials,

it should be obvious that most everyday citizens (to say nothing of a prototypical street criminal), do not have all of them on hand.³ Most novices do not own Dremels, vises, files, or needle nose pliers, and if they choose to spend at least \$150 to acquire them, they cannot be expected to suddenly gain the facility to use these tools effectively.

Indeed, the government sang a different tune about the tools needed for home manufacturing before it reversed course by issuing the Rule. California sued ATF in 2020 to challenge ATF’s refusal to designate various “80-percent” parts kits as “firearms” under the GCA. When it moved to dismiss the case, the government stressed that tools such as end mills “are beyond the ‘common household tools’ that [California] repeatedly characterize as sufficient to complete this detailed work.” Defendants’ Reply in Support of Their Motion to Dismiss 7, *California v.*

³ One indication that the public has fewer tools—and less know-how to use them—than it did in the past is the explosive growth of handyman service companies in recent years. See, e.g., Puneet Soni, *The Increasing Popularity of Handyman Services Across the US* (Jan. 20, 2024) (noting that industry comprises 162,000 handyman service firms with sales of over \$7 billion in 2020 and anticipated annual growth rates of nearly 20% through 2032); see also Baton Rouge Handyman, *History of Home Repair and Handyman in USA: From Colonial Times to Modern Day* (Sept. 22, 2023) <https://mybatonrougehandyman.com/history-of-home-repair/> (“[e]ven as late as the 20th century, many people were still able to fix their own cars, appliances, and other household items”).

ATF, ECF No. 64, No. 20-cv-6761 (N.D. Cal. Jan. 11, 2021).

A Sonoma, California journalist named Austin Murphy confirmed this when hoping to expose how easy it supposedly is to build a “ghost gun” from a Polymer80 kit: “To properly bore the holes for various pins, I would need a drill press equipped with a cross vise, a contraption that does not appear in my modest, motley tool collection.” Austin Murphy, *How easy is it to build a ghost gun? We asked our reporter to find out*, *The Press Democrat* (Nov. 12, 2021). Rather than purchase one, he enlisted the help of his neighbor, “who owns several guns and has access to a serious workshop.” *Id.*

* * *

Why does it matter that the home firearm builder must purchase multiple parts and tools? Because buying separate parts, tools, and equipment to build a firearm significantly increases the cost of building a gun at home. For example, after Murphy ordered his Polymer80 lower kit for \$109.98, he “still needed a slide, barrel and other components to complete the weapon. That’s when the sticker shock hit. It looked like those parts were going to cost in the neighborhood of \$450,” bringing the total to \$560. Murphy, *How easy is it to build a ghost gun?, supra*. Murphy referred to his 2021 project as a “Glock 19 knockoff.” *Id.* Three years later, a consumer can still purchase a new Glock 19 in California for less than Murphy’s combined cost. *See, e.g.*, Sportsmans Warehouse, <https://www.sportsmans.com/shooting-gear-gun-supplies/handguns/glock-19-9mm-luger-402in-black-nitrite->

pistol-101-rounds-california-compliant/p/1155366 (Glock 19 available for \$499).

When the out-of-pocket cost of building a gun at home exceeds the cost of buying a new one, it bolsters the conclusion that homebuilding is an exercise mostly undertaken by hobbyists. *See, e.g.*, Sean J. Nelson, *Unfinished Lower Receivers*, 63 U.S. Attorney’s Bulletin No. 6 at 45 (Nov. 2015) (“Some firearms enthusiasts make their own firearms as a hobby.”).

That conclusion should be all the more apparent when considering the value of all the time novice builders need—before they even start to build the firearm—to (1) acquire the separate parts and tools, (2) study instruction manuals and online videos to learn various approaches to building, and (3) practice the steps with which they are not sufficiently experienced. *Cf.* J.A. 172 (instruction manual urging builders to “[s]low down and work precisely and methodically, Measuring Twice and Cutting Once!!”) (emphasis omitted). The government conveniently omits the many hours associated with these steps. *See also* KMBC 9, *Kansas City gun expert says building a ghost gun takes time, expertise*, <https://www.youtube.com/watch?v=GxcUlyXt24Y> (May 11, 2022) (“People that want to use these for nefarious purposes, they’re not even going to waste their time with this, because it takes too long and it’s not something they’re going to be able to use right away.”).

B. Step-By-Step Guide To Assembling A Glock-Style Semiautomatic Pistol.

The government claims repeatedly that a Glock-style semiautomatic handgun can be built by “anyone” in minutes. But the government’s how-to video does not feature just “anyone” as its narrator and instructor. The government’s archived video⁴ was originally published by Silverback Reviews, an account created to provide “Gun, Ammo, Accessory and Product Reviews.”⁵ Silverback Reviews is owned by a Federal Firearms Licensee called DIYM Enterprises, which also owns a large retail operation called Silverback Guns and Ammo, in Duncanville, Texas.⁶ In short, the Silverback demonstrator is an expert. Given that, it is worth noting that the 21-minute video includes multiple editing cuts and several segments where the video was substantially sped up to save time. In other words, in the government’s own how-to video, it took

⁴ The archived video cited in the government’s brief does not work well on all browsers. Pet. Br. 7 n.1. *Amici* archived a copy at bit.ly/3SGM13j (POLYMER 80 Lower Completion Parts Kit Install).

⁵ See Silverback Reviews, <https://www.youtube.com/c/SilverbackReviews/videos>.

⁶ See DIYM Enterprises, <https://diymenterprises.com/>; Silverback Guns and Ammo, <https://www.silverbackgunsandammo.com/>.

a firearms expert far longer than 20 minutes to build a gun (that was also not test fired to confirm it even works).⁷

Likewise, the government’s argument conflicts with its own evidence. The petitioner’s brief cites an ATF search warrant recounting how one of its confidential informants supposedly built a firearm from a Polymer80 kit in 21 minutes. Pet. Br. 7 (citing Pet. App. 236a). The details reveal, however, that this informant “ha[d] previous experience with firearms” (how much experience was not disclosed), and that his occupation (automobile mechanic) required far greater than “ordinary” ability to use tools. Pet. App. 236a. The affidavit further reveals that the informant’s speed-build resulted in a mistake—the slide lock spring was not installed correctly, which “can result in the slide coming off the handgun during dry firing . . . and [make the gun] less secure when firing live ammunition.” *Id.* at 237a. The special agent inspecting the weapon

⁷ Prior to the Rule’s publication, novice home manufacturers could find a number of other videos online with step-by-step instructions. After censoring those videos for years, YouTube began prohibiting them outright starting in June 2024. Daysia Tolentino, *YouTube is implementing stricter rules around gun videos*, NBC News (June 6, 2024), [nbcnews.to/4cfYF04](https://www.nbcnews.com/4cfYF04); see YouTube, *Firearms Policy*, [https://support.google.com/youtube/answer/7667605?](https://support.google.com/youtube/answer/7667605?content=1&context=acc) (content that “instruct[s] viewers on how to make firearms . . . and certain accessories, or instruct[s] viewers on how to install those accessories is not allowed”). As a result, the options for video tutorials are now limited.

had to correct the mistake before test-firing, due to its “potentially unsafe condition.” *Id.*

Amicus Gun Owners for Safety similarly cites a YouTube video where “two individuals describe how they and others have assembled ghost guns in 25 to 30 minutes,” as if these “individuals” were just ordinary people. *See* Am. Br. of Gun Owners for Safety 15–16 (citing Rob Pincus, *30 Minutes to build a ghost gun?!?! ... and other thoughts on Private Gun Making* (Apr. 27, 2022), <https://www.youtube.com/watch?v=JILCdMJXpgQ>).

In fact, these “individuals” are well-known firearms experts. One, Rob Pincus, has worked in the firearms industry for over 20 years: He conducts training programs for United State military special operations personnel and law enforcement. I.C.E. Training, *About Us*, <https://ice-training.us/about-us/>. He has also written nine books about firearms and produced over 100 training DVDs. *See Walk the Talk America*, Rob Pincus, <https://walkthetalkamerica.org/rob-pincus/>. The other participant in the conversation is a prolific online gunsmithing personality who posts content under various “Mr. Snow Makes” accounts.⁸

⁸ *See, e.g.*, Mr. Snow Makes Content, <https://odysee.com/@mr.snow.makes:6?>. He has since produced a video demonstrating in detail the same steps we set out below for construction of a Glock-style handgun. MrSnow-Makes, *P80 PF40c complete build video*, <https://rumble.com/v5a9cop-p80-pf40c-complete-build-video.html>. This video highlights that even experts are not immune from the common pitfalls of drilling misaligned pin holes

In 2023, he won the “Gun Maker’s Match” competition, a national shooting competition exclusively for individuals who make their own firearms. Gun Maker’s Match Media, *Gun Maker’s Match 3 a Huge Success!* (May 12, 2023), <https://gunmakersmatch.com/f/gun-makers-match-3-a-huge-success>.

Concluding that “anyone” can manufacture a functioning firearm in 20 minutes because these and other experts have done it before is like saying Tiger Woods and other PGA Tour pros can drive a golf ball 300 yards into the fairway with an “ordinary” golf club, so it must be the case that anyone can do the same thing if they just watch a few instructional videos. The government wholly discounts the skill and expertise—gained only through trial and error—that is required to succeed.

In the real world, how do non-experts approach building a gun from a parts kit? The California journalist admitted that he “felt of twinge of panic as he read the instructions,” and even after turning the work over to experts *three separate times*—first to mill the frame, then to assemble the numerous parts, and finally to fix it when it jammed—it took the group more than seven hours to build a functioning firearm from a Polymer80 kit. Murphy, *How easy is it to build a ghost gun?*, *supra*.⁹ Contrary

and failing to mill the barrel block smoothy enough for the recoil spring to function properly.

⁹ A Kansas City news station got a similar reality check when it interviewed a gun store owner who builds custom firearms: he confirmed that “[i]t does not take 30 minutes

to the government's assertions, it is difficult for non-experts to even get started, let alone succeed, when it comes to building a handgun on their own.

* * *

The multi-step process starts with building and milling the frame.

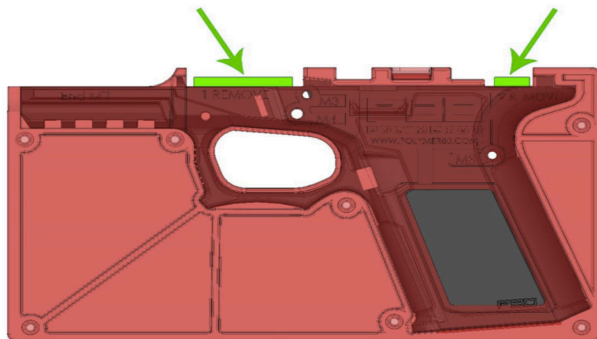
1. Building The Frame.

The steps to complete the frame consist of the following:

Drilling Pin Holes. The first step is placing the jig in a drill press vise and drilling six holes (three on each side of the precursor) with a hand drill. These holes will accommodate three pins that are installed later in the process to hold the frame and the internal parts together. If the holes are not precisely aligned or are drilled too large, the pins will not fit securely through the completed frame, which will prevent the firearm from working (or even assembling). Drilling six holes may sound like a simple task, but this step requires precision. *See, e.g.*, J.A. 171 (instruction manual noting “[t]he biggest problems from our builds came when testers attempted to drill the two pin holes ([for t]he front and rear rails) using the jig in the upright position” as opposed to sitting flat). If these opposite side pin holes are not aligned to within a few thousands of an inch, the firearm cannot be assembled.

to build one of these. It takes hours if not days to build one of these kits.” KMBC 9, *Kansas City gun expert says building a ghost gun takes time, expertise, supra.*

Top Rail Milling. The unfinished frame comes with polymer tabs that extend above the rail, shown in green below:

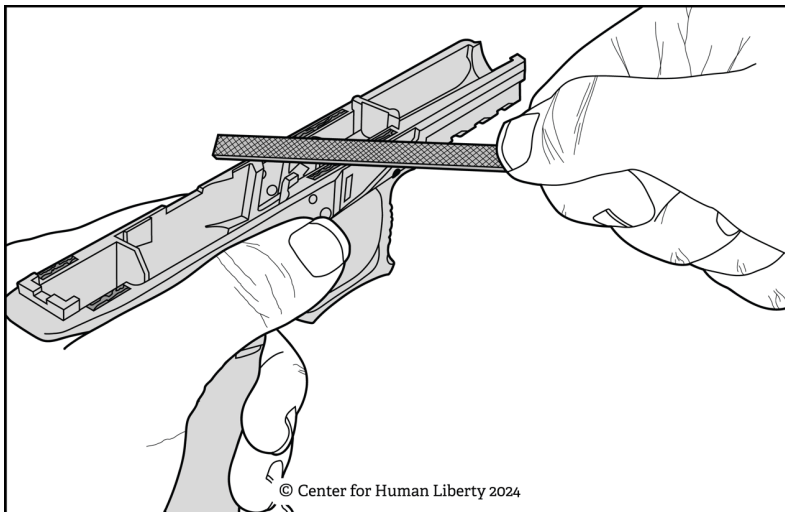


J.A. 176.

Whether the raised material is initially removed with a Dremel (as in the government’s sample video), with an end mill (as recommended in the instruction manual, J.A. 175),¹⁰ or with a cutting tool such as snips, the milling work will require finishing with files and sandpaper with decreasing levels of grit to ensure a smooth and level surface. Otherwise, the slide will not function properly. Milling the unfinished frame (both the rails and the barrel block, see below) is by far the most time-consuming part of building the frame—witness the number of times the

¹⁰ The instruction manual cautions that a “Dremel tool in the untrained hands can damage your new build extremely fast.” J.A. 167–68. Non-experts are prone to allowing the spinning tool to rotate into nearby parts and ruin the project just as it is getting started.

video speeds up during the filing of the frame in the government's sample video.

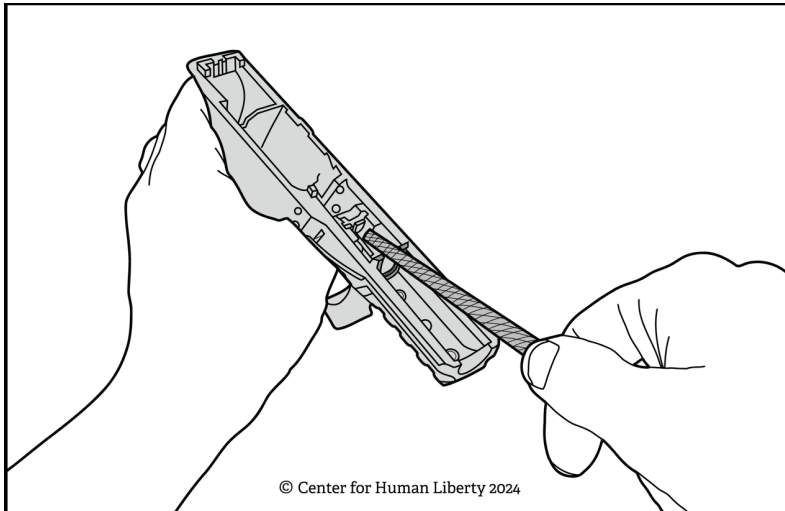


Barrel Block Milling. Milling out the “barrel block”—the polymer material forming a dam in the barrel cavity, as shown in green below—involves more difficult work than milling the rails.



J.A. 177.

This project is more difficult because the working area is smaller, and the bottom of the newly-created space must be rounded to match the barrel cavity. The finish must be rounded to allow the recoil spring to function in this channel. To achieve the rounded finish, the preferred method is to stand the frame up parallel to a drill press or milling machine and feed a milling cutter into the material from above. This is a complex skill, so another method for removing this material is feeding a ball end mill (the end of the cutting tool is shaped like a ball) into the channel horizontally. However the bulk of the polymer material is initially removed, final milling requires fine-tuning with rounded files or a Dremel type tool. Rough spots that protrude as little as a few thousandths of an inch will prevent the recoil spring from functioning.



Murphy recounted that, even after turning the work over to his experienced neighbor with the “serious workshop,” the milling “prov[ed] more laborious than I’d been led to believe by Polymer80.” Murphy, *How easy is it to build a ghost gun?*, *supra*. It took the experienced neighbor an hour and 45 minutes “to mill and complete the lower receiver.” *Id.* “Setting down a file at one point during this process,” the neighbor “noted that the time required to assemble this gun served, in a way, as ‘its own cooling off period.’” *Id.*

Installing Locking Block Rail System. The final step of building the frame involves placing the locking block rail system into place in the barrel cavity above the space for the trigger. The purpose of this rail (like the rear rail module, which is installed a few steps later) is to marry the slide to the completed frame: both have raised portions to match the grooves in the slide. The locking block rail has two holes that must align with the drilled holes. One of these pins holds the slide release pin, which holds the block in place; the other pin holds the slide lock in place (see below). After the rail is placed inside the barrel cavity, the first forward retaining pin can be hammered in place.

2. Installing Everything Else.

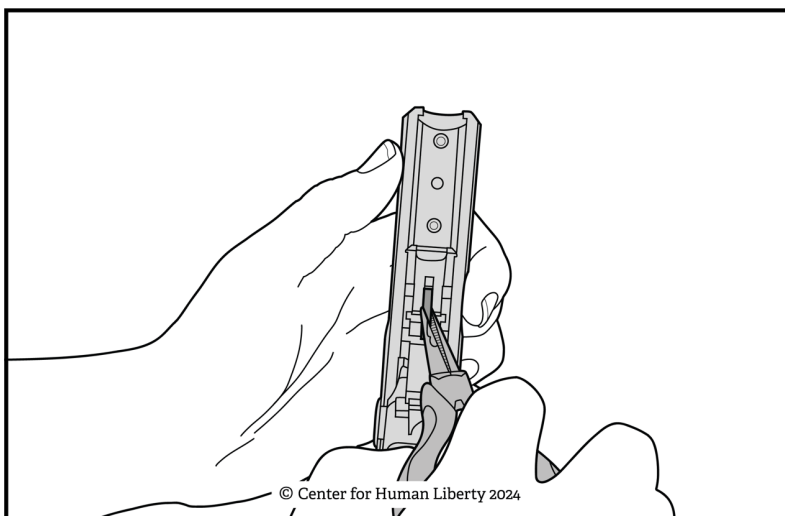
The government entirely glosses over the many remaining steps required to convert the milled frame into a “fully functioning firearm.” Yet this involves several more intricate steps than completing the frame. Unless a person has a working knowledge of how firearms parts interact with each other, the final assembly is more difficult

than it appears when a skilled gun mechanic is assembling the firearm in a how-to video.

Our intrepid reporter Murphy enlisted the help of a different firearms expert for this phase: “To make sure I made no dumb, dangerous mistakes, I invited a gun-expert acquaintance to observe and help. Even with the guidance from several YouTube videos, and his considerable assistance, it took us another [two and a half] hours” to assemble the firearm.” Murphy, *How easy is it to build a ghost gun?*, *supra*. A separate video reveals that, in fact, the firearms expert’s “help” consisted of performing nearly all of the installation and assembly of the many parts; Murphy was utterly lost. The Press Democrat, *How easy is it to build a ghost gun? We asked our reporter to find out*, <https://www.youtube.com/watch?v=XDdF-Pov-fdU> (Oct. 19, 2021).

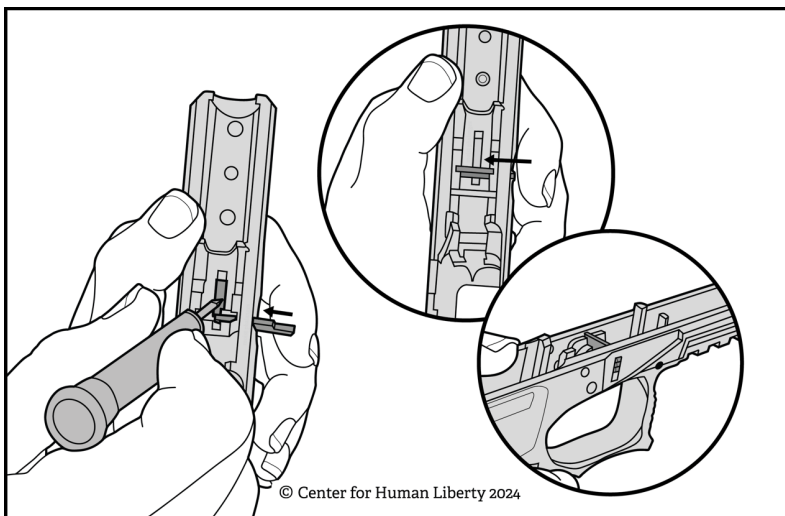
Those remaining steps include:

Installing Slide Lock Spring and Slide Locking (or “Take Down”) Lever. The slide lock spring is a small L-shaped spring (roughly 5 centimeters by 5 millimeters) that holds the slide lock in place and fits in a small socket in the barrel cavity and within the space surrounded by the block rail. The space for fitting it is so limited that it requires the assistance of a thin punch to press it into place.



The slide locking lever (also called a takedown lever or locking bar) is a rectangular shaped piece (roughly 2.8 centimeters wide by 5 millimeters tall) with a groove across its top half. To install the slide locking lever, the slide lock spring must be depressed with a punch, and the lever is slid into place through a slot in the side of the

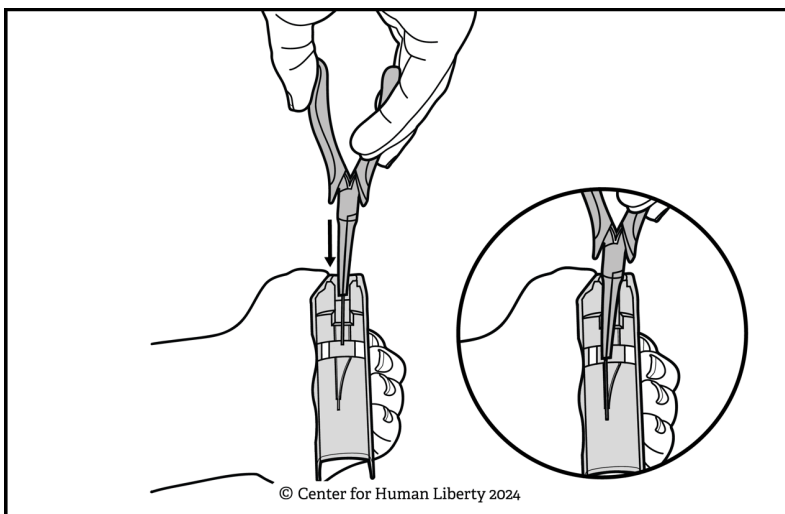
frame over the trigger space, with the groove facing rearward. After installation, this groove interacts with the barrel to lock it into place. When properly installed, the sides of the lever protrude outside the frame (about 2 millimeters). Pressing down on this portion of the lever allows for the disengagement of the barrel and removal of the slide (called “taking down” the slide).



Murphy attempted to perform this step on his own, and he referred to the episode as “slapstick—witness my dozen or so attempts to drop the itty-bity slide lock into its elusive groove.” Murphy, *How easy is it to build a ghost gun?*, *supra*.

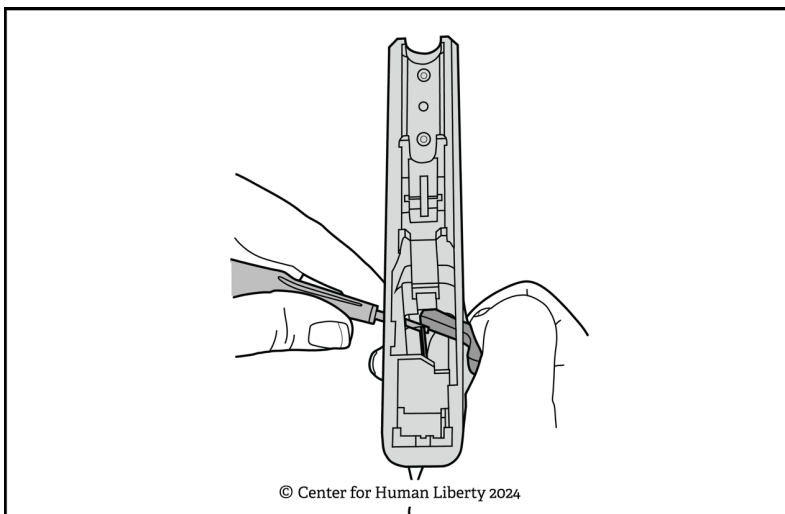
Installing Magazine Release Spring and Button.

The magazine release spring is a very thin rod (roughly 9 centimeters long). It fits into a small channel in the front edge of the magazine well. The spring and channel are so small that needle nose pliers are required to press the spring into place. When installed, a millimeter or two should be visible from the exterior through the notch in the side of the grip.



The magazine release button (a small rectangular piece with a curve on one end) then slides into that notch. To secure it into place, however, the spring must simultaneously be pulled rearward with a punch or screwdriver and then forward in a semi-circular motion into a slot beneath the button. These parts work in tandem to allow the shooter to release the magazine by pressing down on the

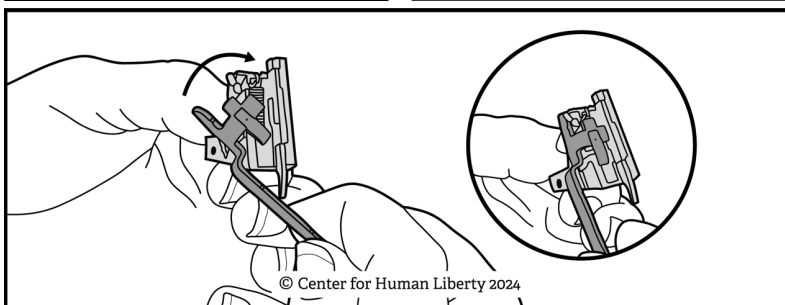
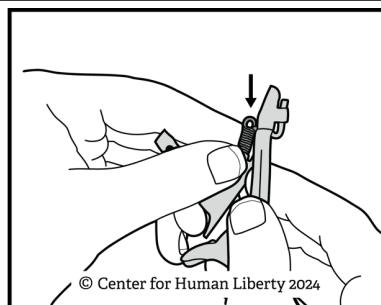
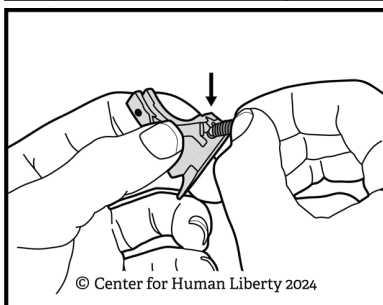
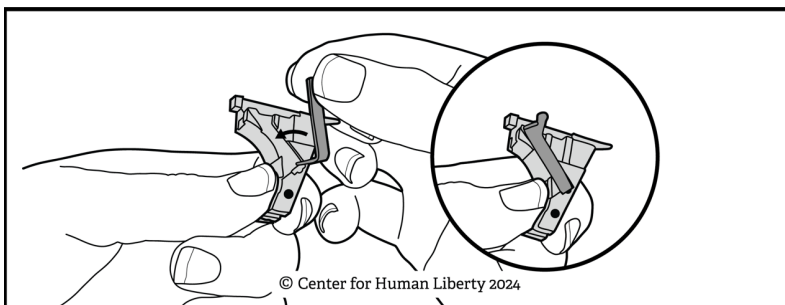
curved portion of the button that protrudes out from the grip.



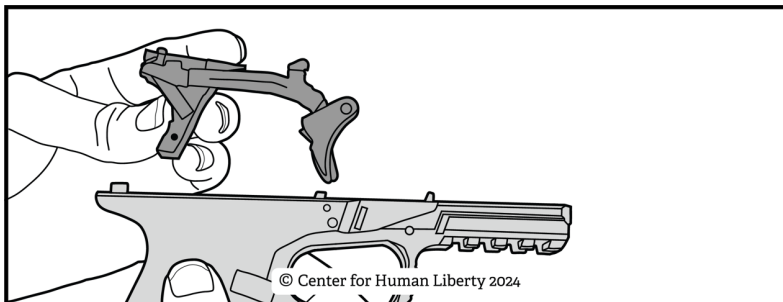
Murphy described his struggle installing these parts as a “Gong show: it took at least six tries for me to insert the needle-like rod into its proper channel, then slide the magazine release button under it.” Murphy, *How easy is it to build a ghost gun?, supra*.

Combining Trigger Assembly and Dropping Into Frame. To construct the trigger bar assembly, the connector (an L-shaped bar roughly 2.7 by 1.2 centimeters) is secured to the channel in the trigger mechanism housing (a roughly triangular piece with one rounded edge). The tiny trigger spring is then attached to the rear of the sear

housing. To complete the assembly, the trigger and trigger bar are attached to the free end of the spring and then secured into place against the sear housing.



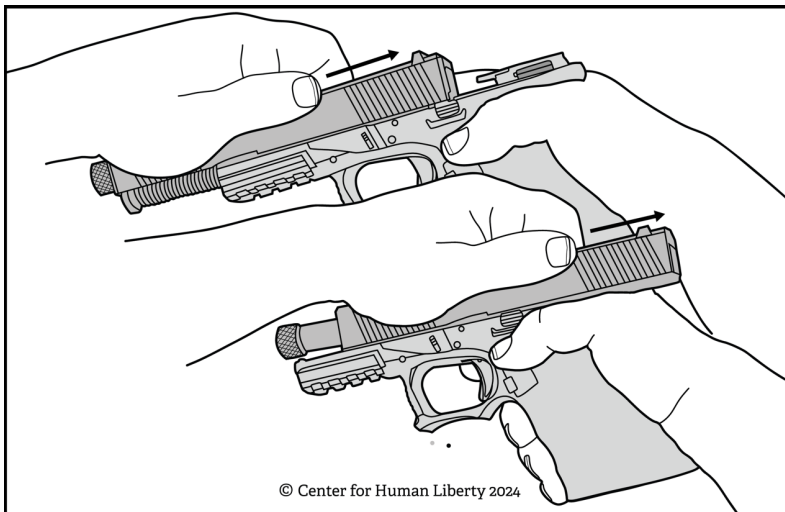
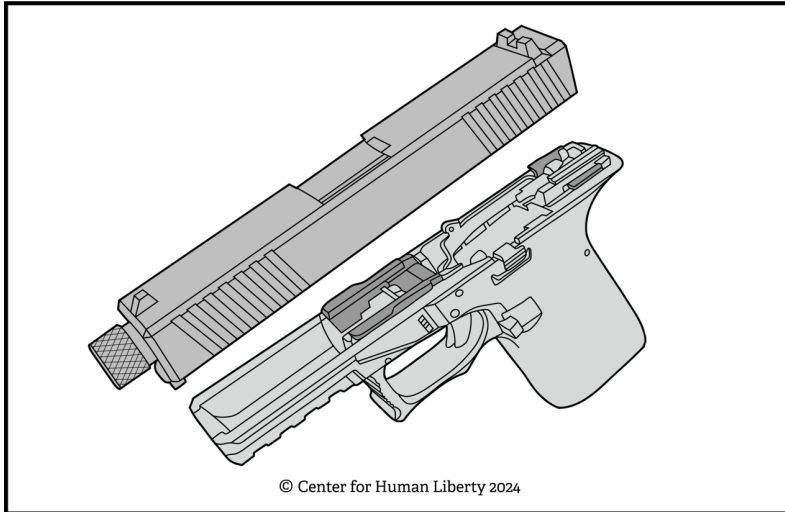
Once the trigger assembly is complete, it is placed into the frame along with the rear rail assembly.



Inserting Pins and Slide Stop Lever. The next step is to install three pins that are critical to the pistol's operation. Each pin is inserted beveled-end first, and secured into place using a hammer and punch. First is the locking block pin at the center of the frame. Then the slide stop lever hooks around the locking block pin and is placed on the frame. (The slide stop lever allows the shooter to lock the slide back to confirm the magazine is empty and facilitates faster reloading by pulling back the slide or depressing the slide lock to advance the first round of a new magazine.) Next, the trigger pin is inserted to hold the rear rails in place, followed by the housing pin.

Attaching Slide. It is worth emphasizing at this point that the demonstrator in the government's how-to video used a slide that was already assembled. The parts list in the Joint Appendix's instruction manual identifies *14 different parts* (including, among other things, the barrel, firing pin, firing pin spring, and recoil spring) that would comprise the slide. J.A. 186–88. Building a slide

from a parts kit is no easy task. Attaching a fully-built slide to a frame is relatively straightforward.



However, the moment the builder tries to rack the slide is often the first time that the builder learns something went wrong with the milling process. *See* J.A. 183–85 (discussing “tuning and fitment” of a home-built Polymer80). Here’s what Murphy had to say:

When it finally came time to “rack” the slide, the movement started off smoothly. Halfway through, however, the slide kept running up against some unknown roadblock. We spent another hour disassembling, smoothing, filing, tinkering, reassembling. [¶] There was profanity. [¶] But the slide continued to be stubborn, balky. I could fire one shot, had I been at the range. After that, the gun would jam. [¶] A quick internet search revealed that this is a problem common to those of us building Polymer80 Glock clones: “You’re going to have to oil the crap out of it and manually rack the slide about 3 or 4 hundred times.”

Murphy, *How easy is it to build a ghost gun?*, *supra*. The ultimate solution? Murphy turned possession of the malfunctioning firearm over to the “gun expert friend” who took it home for the night to spend “a few more hours troubleshooting. *Id.* After this mystery work by the expert, the slide would finally function properly.

A beginner like Murphy is hardly alone with this frustration. In a similar effort to expose the perceived need to crack down on home manufacture of “ghost guns” with a demonstration on CBS’s *Face the Nation*, ATF’s Director Steven Dettelbach told host Margaret Brennan that his

colleague (ATF's acting chief of the Firearms Ammunition Technology Division Chris Bort) was going to "make a new gun for" her by taking the slide off of a Glock and installing it on a Polymer80 frame. Face the Nation, *ATF director and firearms expert show some of the weapons being found on the streets*, <https://www.youtube.com/watch?v=J3CM8tZQ9Es> (March 3, 2024). Bort points to the frame and says, "with about 20 minutes of work they can make it into a working firearm." *Id.* When the senior ATF official attempts to attach the aftermarket slide on the frame, however, he could not get it to rack; it got stuck, so the sample "ghost gun" was obviously not a "working firearm." But the show goes on.

These are not isolated examples. Online forums are full of complaints about how difficult it is to build guns that actually work. *See, e.g.*, Glocktalk, *P80 Problems*, <https://www.glocktalk.com/threads/p80-problems.1930153/>; Glocktalk, *Polymer 80 G19 won't go into battery*, <https://www.glocktalk.com/threads/polymer-80-g19-wont-go-into-battery.1900913/>. And one can find countless videos discussion common problems like the slide falling "out of battery," *see, e.g.*, Just A Regular Guy, *P80 Glock #3 most common problem Battery, Slide creep, SOLVED FIXED. Easy!* (Aug. 28, 2022), <https://www.youtube.com/watch?v=2SOIS14tIq0>; or experiencing a "trigger reset," Tactical Adviser, *Polymer 80 Trigger Reset Problem* (Jan. 16, 2019), https://www.youtube.com/watch?v=f1mhnpU_hb4, to name a few.

Indeed, the Petitioner's Appendix recounts how another ATF expert faced a trigger reset issue when at-

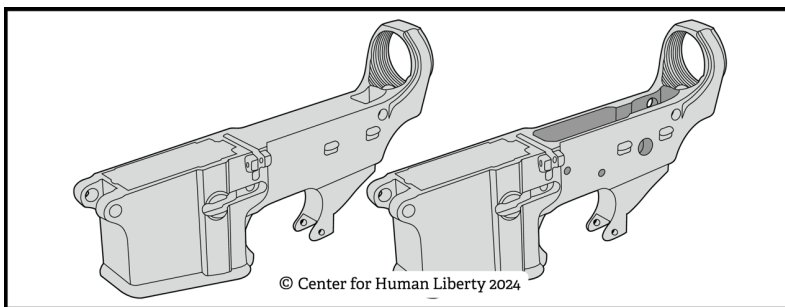
tempting to build a Polymer80. In the search warrant affidavit included in the appendix, Senior Special Agent David Hamilton, “who is also an ATF Firearms and Ammunition Interstate Nexus Expert,” built a handgun from a Polymer80 kit, but he “encountered” what his affidavit termed “issues beyond those normally expected for fitting new parts to a firearm.” Pet. App. 233a. His build was “not operable” due to the trigger reset issue; he had to spend two hours trouble shooting and looking for videos to show him how to fix the issue before the gun could fire. *Id.* at 233-34a.

* * *

In sum, the central premise of the government’s argument—that “anyone” can build a fully functioning Glock-style handgun from a parts kit “in a matter of minutes”—is simply wrong.

II. Building an AR-Type Firearm Is Far More Difficult.

The government spends almost no time addressing home construction of weapons on the AR-type platform—the most common style of home-manufactured firearm. *Cf. Heller v. District of Columbia*, 670 F.3d 1244, 1287 (D.C. Cir. 2011) (Kavanaugh, J., dissenting) (observing that “[t]he AR-15 is the most popular semi-automatic rifle” in America). That’s because the process of machining an AR-type lower receiver indisputably requires far more time, skill, and effort than building a Glock-style pistol. There are two primary machining operations necessary to convert a “blank” into a completed, functional AR-type lower receiver: (1) milling out the fire-control cavity (*i.e.*, the area that houses the trigger mechanism and hammer); and (2) drilling holes for the selector pin, trigger pin, and hammer pin.



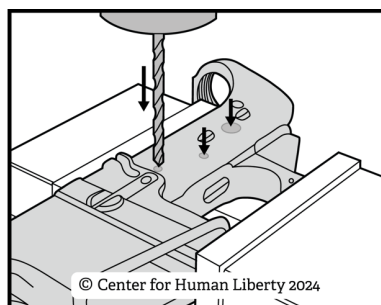
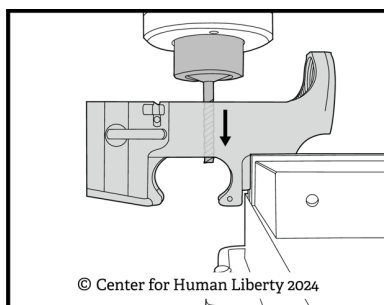
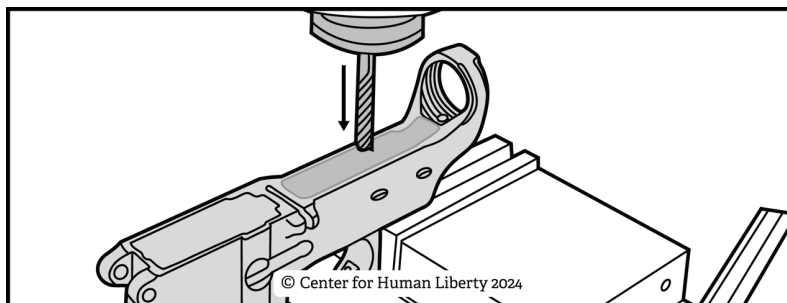
This may sound straightforward, but—as ATF itself has explained—this is “detailed work” that “requires specialized tools and specialized skill.” Defendants’ Reply in Support of Their Motion to Dismiss 7, *California v. ATF*,

ECF No. 64, No. 20-cv-6761 (N.D. Cal. Jan. 11, 2021). Far more than “basic” or “common” hand tools are needed to complete the job. *See id.* (listing necessary tools, including “multiple drill bits strong enough to drill aluminum or polymer . . . , along with lubricants to reduce heat and prevent the drill bits from melting,” as well as “specialized tools, such as end mills, [that] must be used to excavate the cavity to house the trigger and fire control mechanism”). An Assistant U.S. Attorney detailed the “long, slow milling process” to excavate the fire control cavity as follows:

Once the purchaser has the necessary tools, supplies, and lower receiver, he is ready to begin by drilling some small, shallow guide holes with a smaller drill bit, and then a series of other holes before clearing out more of the cavity with a larger drill bit. At this point, by putting drill to the fire-control cavity and altering the fire control cavity area in any way, the lower receiver is considered a “firearm,” even though this receiver could not actually expel a projectile by means of an explosive if combined with an upper receiver and other parts.

After the initial drilling of the fire-control cavity, the purchaser must turn the jig and lower receiver on its side and drill the selector, hammer, and trigger pin holes. The fire-control cavity is complete once the purchaser slowly and carefully mills the cavity with end mills.

Nelson, *Unfinished Lower Receivers, supra*, at 47.



This laborious process requires specialized expertise with milling equipment, and even skilled firearms professionals encounter difficulties. In fending off a claim that completing an AR-type receiver blank is just a “simple process,” the Chief of ATF’s Firearm Technology Industry Services Branch—the renamed branch that *amicus* Vasquez led—explained how difficult this work is even for a retired U.S. Army Infantry sergeant with nearly three decades’ hands-on technical experience in complex weapon platforms:

I completed my first AR-type receiver in the fall of 2017, using a compatible AR-type fixture (*e.g.*, a jig), a hand drill, and a drill press. The initial drilling of the fire control cavity took me approximately three hours. However, the dimensions on the cavity were not to specification, and I needed another hour and a half to get the receiver into a functional state. Even at four and a half hours, and with my considerable experience with firearms, the completed receiver build quality was substandard, with the fire control cavity not being cut to exact specifications.

Declaration of Daniel Hoffman 17 (¶ 38), *California v. ATF*, ECF No. 198, No. 20-cv-6761 (N.D. Cal. Jan. 11, 2021).

As with building a Glock-style pistol from a Polymer80 kit, the process of building a complete functional firearm isn't over when the milling stops. To build a complete AR-style firearm, you need additional tools: Beyond the tools identified in the brief above, an AR-type firearm requires a vise block, bench block, barrel rod, torque wrench, armorer's wrench, and more. Dedicated kits with all of the customary tools are available for upwards of \$300. An AR-type firearm is also far more intricate than a Glock-style

pistol; it has well over 100 parts.¹¹ This doesn't come cheap: All told, building a fully functional AR from scratch can run anywhere from \$500 (for a basic AR-15-type weapon) to \$3,000 or more (with all the bells and whistles).¹² As before, even if one spent the time and money to gather all of the necessary tools, equipment, and parts, they would still need the knowledge and skill to assemble a working AR-type firearm.

In short, building an AR-type firearm from a parts kit requires substantial effort, specialized expertise, uncommon equipment, and a significant amount of time. The government cannot plausibly contend that this work can be accomplished “in a matter of minutes” or that simply “anyone” with “rudimentary skills” can do it.

¹¹ See Black Rifle Depot, *AR 15 Parts Diagram / AR 15 Parts List*, <https://blackrifledepot.com/ar-15-parts-diagram-ar-15-parts-list/> (cataloguing and describing the function, role, and maintenance of 119 separate parts for an AR-15 type rifle).

¹² This excludes the cost of the jig (\$200–\$350) and tools necessary to do the work.

CONCLUSION

The decision below should be affirmed.

Respectfully submitted,

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