Friends, Donors, and Fellow Lovers of Liberty,
I am taking a break from packing to begin this update. As this month marks the 3rd anniversary of public announcement of the project, I will leave Flagstaff on the 25th to establish a manufacturing operation with Michael in Kerrville, Texas, for commercial Piggy Popper production until we can move to Oklahoma. The end game is now, but of course as they say, “the end has no end”.

Projectile development is fully complete.

More specifically, with the wrap-up of bearing diameter testing several weeks ago, **development of the economy variant is complete**. Premium Dagger development will be finished shortly, having left only to evaluate a minute length increase appropriate to achieve proper projectile weight. This was put on hold to place priority on the upcoming commercial and open-source release of the economy variant. **Tolerance testing remains to be performed** this month to evaluate acceptable variation from ideal bearing and bore diameter of the projectile. Such tolerancing would have already been complete if not for lack of critical equipment as global **supply disruption continues to hinder our work**.

I am now writing the open-source manual.

The manual documents project motivation, technical features, specifications, and explanation of the technology, provides a summary of design process, development work, and technical investigation, and of course instructs DIY production for the now-fully developed economy variant. Take heart that **we will revise the document** to cover all new variants and chamberings, DIY methods, or any other updates as they are developed. Unfortunately, we are a uniquely conspicuous target, unlike our friends in the 3D-printed arms space, for enforcement of state and federal prohibitions of online weapons manufacturing instruction. Eventually, the **USPTO will publish our patent including instructions for manufacture** free and available to the world, but until then, **we will offer the manual on flash drives** through our website at cost of the drives and labor to flash them. Certainly no one else will upload the contents to the open internet because we all observe strict adherence to state and federal property prohibitions. **We would like to provide the manual to all you donors of over $50** along with your physical donation favors, but we will have to assess resource availability when the time comes. The manual will be cryptographically-signed to verify authenticity and revision currency.

Production of keychain donation favors is underway.

We appreciate your patience in waiting for your promised physical favors which have been a long time coming. Dimensional development of the Dagger is now complete enough that we’ve started turning jackets and cores to fabricate the keychains and are about 25% through cores and 85% through jackets. **Please bear with us** as we distribute among you donors over a span of time. There are over 300 keychains to distribute and each takes about 15 minutes to produce by hand, excluding shipping, in whatever time isn’t spent on manufacturing development and documentation. We will likely ship to larger donors first and then in order of reception. Fulfillment will also be logistically intensive for us and as time approaches, we will likely send you emails from this or another atlasarms.org address requesting reply to confirm

desire and shipping info, so please **categorically whitelist atlasarms.org addresses** if not already. The **keychain "projectiles" are dysfunctional models** utilizing "improper" adhesive and a titanium core to ensure legal possession anywhere in the United States while visibly indistinguishable from an actual Dagger.

Manufacturing process and equipment development has begun.

A major aspect of project development is and has been commercial manufacturing methods, as the construction of the Dagger is quite unique and there exists no equipment or industry support at present to automate such assembly as there is for more typical projectile construction. I had designed the general process and equipment, but while I've been finishing bullet development and writing documentation, **Michael has acquired and built most of the base machinery and programmed the PLC** used to automate and control the operation. This machinery along with the PLC is a total manufacturing solution performing every aspect of projectile assembly and conducting quality control checks and measurements for each step. **3D printing has been extremely useful** both for prototyping (mechanical hardware) and construction (control console boxes for instance) in reducing financial and temporal cost to construct these means of production. We'll have 2 months to finish the assembly equipment and facility when I arrive in Kerrville if we're to meet our timeline goals.

~~We will be attending SHOT Show 2022.~~

~~Our primary purpose at the show is to connect with industrial suppliers relevant to beginning commercial production, but of course there are others we look forward to meeting as well as the opportunity to peruse the show floor. We'll arrive the evening of the 16th and depart the morning of the 20th.~~ ~~**Let us know if you'll be at the show and perhaps we can meet.**~~ ~~I can also recommend an excellent Mexican hole-in-the-wall I (and my billionaire boss) frequented in Vegas when I worked there.~~

Actually, **we will not be attending SHOT** as most of the companies with whom we sought to meet have pulled-out, ironically some citing fear of Covid and others opposition to the mask mandate. Instead the saved cost will pay for manufacturing development. I personally suspect many such as Sig and Beretta pulled-out because representatives of any given company are limited, and the more pull-out, the more pull-out like a bank run. Whatever the case, it looks to be a lame show this year.

As I write the Dagger manual, I've checked our test data a few times to verify that the listed features and specs are actually as excellent as written, and they are, even surprising to me. It confounds me that no one in the lucrative-but-lazy global military-industrial complex had ever cared to carry out such optimization of the most ubiquitous cartridge in the world before now. So numerous and superlative are the features that I believe it will be difficult to help consumers grasp or even believe the magnanimity of the objective advantage the Dagger technology boasts over all other 9mm ammo. How will we even advertise so many features? No one should ever buy normal hollow points for defensive carry again, but how do we tell them? The penetration, the soft target devastation, shattering the 500-ftlb ceiling for 9mm Parabellum (520ftlb), highest energy-per-pressure, highest velocity, lightest cartridge, likely lowest

recoil-per-energy, and lead-free to boot. The potential is there, more promising than I could've ever asked when we began, but there's still plenty of work to be done to tap into it.

As always, we greatly appreciate your financial and social support which has made all this possible. Reach out any time by email or through Twitter.

--Austin Thomas Jones
Chief Engineer, Atlas Arms
austin@atlasarms.org