Friends, Donors, and Fellow Lovers of Liberty,
I and Atlas Arms have maintained a relative public silence for quite some time. We are very happy to emphatically break that silence in September.

We came within an inch of reliable armor penetration in March.

In the last update, I declared to you that we were almost ready to demonstrate armor penetration but would wait til the spring. The weather cleared in early March and out of the gate we saw reliable performance in our SAAMI-spec. universal receiver barrel. Thinking we were then ready to demonstrate penetration ability, we were quite dismayed to find that **no real pistol barrel is cut to SAAMI specification** (the body which governs ammunition and barrel standards), and that **the bullet experienced catastrophic structural failure** shot from any real pistol barrel. Analysis indicated mode of failure was insufficient jacket adhesion; the bond was barely too weak to survive slightly more impulsive dynamics induced by the longer throat and freebore travel of an actual pistol chamber.

Jacket material has been revised.

Over 3 months, all attention lay in an exhaustive search for a better adhesive for bonding the jacket. Not only did this **prove very difficult due the exotic nature of the jacket material** at hand and the associated poverty of relevant technical data in conjunction, but like perhaps most businesses these past few months, **covid frustrated our efforts** as industrial supplies and technical support have become more difficult to access. In desperation, we turned to an alternate jacket material which we had hoped to test in the optimization phase but of which I was skeptical was structurally-sufficient to withstand firing. Indeed, **the new material enables the Dagger to function flawlessly in all 9mm pistols!** With that issue settled, we now have a minimum viable product, one which (if we didn't care about the quality of our product like virtually all the rest of the gun industry) we could actually bring to market. As a bonus, **the new jacket material is much cheaper than the last.**

Atlas Arms has its first intern.

In May we welcomed to Flagstaff a mechanical engineering student and former army road-clearing technician, Will, to intern here with us. Will has been known to the 3D-printed firearms community for some time having developed a working bolt-action, all-printed, .50-caliber pistol. Will has been helpful in testing the Dagger and materials research, but has been mainly focused on our "ammo hose" secondary project discussed later. **If you or someone you know would like to intern with us, send us an email!** We are always looking for enthusiastic contributors. Even informal remote contributions are quite welcome, and we're still specifically looking for mechanical and electrical engineers and media managers.

The Dagger DOES penetrate IIIA soft armor!

Last Tuesday, now that we have a functional bullet which reliably survives to target, feeds, and cycles, **we shot armor for the first time**. The armor was a level IIIA panel (rated to

stop standard pistol loads up to .44 magnum and 12 gauge slugs) backed by the NIJ standard 5" of ballistics clay. Not only did **the bullet perforate the armor** panel remarkably cleanly, but the clay backing witnessed a 2" exit wound. The chronograph read **2263fps** out of the Glock 19. Perfectly as designed, the jacket was recovered cleanly sheared off the core and **mushroomed to a 0.55" diameter**, clearly hinting at the remarkable wounding capability of the APHP design on unarmored targets. Of note, this was an unoptimized bullet, propelled by an unoptimized powder charge, and possessed a penetrating core composed of a more common, much softer material we've used for development rather than the special alloy intended for the commercially-available model.

A more professional penetration demo video is in the works.

Saturday we met with a videographer from the Dallas area to mock-up and scout-out an armor penetration demonstration video for **public release in September**. We are honored that he and his associate have agreed to produce the video free of charge, even driving so far with their professional equipment, out of support for the project. With them will be coming a podcast host well-known in libertarian spaces who's been following our work. The video is purposed to **prove that the Dagny Dagger penetrates armor** as we claim, beyond a doubt, and will feature single-take, uncut footage of a multiple-shot "double-tap" into armor from multiple cross-referenced camera angles. We hope also to demonstrate the terminal performance of APHP on unarmored ballistics gel, and perhaps the "screamin'" velocity achieved by our 9mm cartridges in a carbine-length barrel. **We will update the Atlas Arms website** before the demo video is released, about which many of you have asked, including checking-off at least one accomplished item on the list of Dagger features there and adding the data yielded by our commercial ammunition pressure tests discussed in the previous update. I will also appear on many podcasts in a publicity tour of sorts which we expect to surge the funding campaign. **If you would like me to appear on a particular show or medium, let us know.**

Ongoing work and the road forward:

- **Dagger development has entered the optimization phase.**
  While we are now producing fully-functional Dagger prototypes which easily penetrate armor, I would be ashamed to launch to market with them. We still need to investigate and test changes to the bullet geometry and powder load, including utilization of an as-yet undisclosed core alloy, to push the possible edge of ballistic performance and penetrative ability. I believe the Dagny Dagger 9mm has the potential ultimately to breach ALL soft body armor and IIIA steel plate armor from a pistol and level III rifle-rated steel plate from a carbine barrel. We aim to finish development by January 1st, but we may need a few months of 2021 depending on the weather God has planned.
- **We will retain a lawyer in the coming month.**
  A prominent attorney of the Firearms Policy Coalition is not only interested in the project, but has offered us a significant discount on his rate and retainer as a supporter of the project! He will be helping us navigate ATF regulation, prepare for the legal maze of

ammunition production, and formulate strategy to ensure the Dagger remains generally non-prohibited.

- **“Ammo Hose” proof-of-concept continues.**
  I had been passively working for over a year on a secondary project which has been more active since Will started working with us. Imagine if the cost, complexity and weight of the delinking mechanism on a belt-fed machine gun could be moved somewhere else. This device would do just that, feeding hundreds of rounds of ammo from a hopper, through a “hose”, and into the magazine well of a standard box magazine-fed firearm like an AR-patterned rifle. Early testing has shown great promise, and we hope to fully prove viability by year’s end.
- **Come to the “Bear Arms and Bitcoin” event if you can.**
  The conference is organized by the Guns ‘n Bitcoin podcast on which I and Will have been guests. Speakers include many in the DIY firearm and bitcoin space in the spirit of “freedom tech”. I will be speaking on the deeper themes and intuitions around the Dagny Dagger project and unveiling “Blackbox”, a concept to frustrate property prohibition enforcement by way of cryptocurrency. September 19-20 in Austin, Texas.
  https://gunsnbitcoin.com/bear-arms-2020/

As you can see, though with a small crew often progress is slower than I’d like, we’re working hard on many fronts to make good on our promise to bring this technology to you, and now the pace is quickening and the progress couldn’t be more exciting for us.

My appreciation and that of all of us here is ceaseless to all of you donors who not only support us financially at cost to yourselves but also motivate and inspire us in the meaningfulness of our work and the demand for it. Keep spreading the word, and especially the video when it airs. Email us anytime or engage via social media.

--Austin Thomas Jones
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