

Online Gallery Presentation

Pneumatic cannons by Augie and Sydney

THE GOAL

WHEN we started this IMP Project, we wanted to make a hairy Jerry Powerball Potato Cannon. after a little more research, we realized that hairy Jerry potato cannons are technically illegal. In order to not break the law by making an explosive firearm, we decided to make a pneumatic air cannon with the hairy potato - launching capability.

THE METHOD

Since there is not much information online about pneumatic cannons, it was a bit tricky to find a plan to follow. After a bit of searching, we found a Youtube video titled "how to make a simple air cannon." It was not as simple as we first thought. Following this video, we assembled our cannons, out of PVC parts and sprinkler valves. Neither of us had any experience with PVC prior to this project. So we learned as we went.

A Quick Note on how the Air Cannon works

The air cannon works by forcing compressed air through a nozzle which creates a high velocity jet of air. This jet of air strikes the target material, causing it to move or disintegrate.

The way an end (the chamber) is kind of valve, not is at pressure, once the air will shoot into (possibly) is loaded, through the air.

MAKING AN AIR CANNON THE PROCESS

BY AUGIE M. AND SYDNEY R.



A Short Summary of the Sprinkler Valve

The valve we used to release the pressure from the chamber into the barrel is called a spring loaded valve. The way it works is that once we come in through the inlet valves down the lip, our car goes up a pad for counter balance back up the slide. Since the pressure outside the R.P. is greater than the pressure below it, the air comes to expand when the pressure above the R.P. is released. If it left and the rest of the air stayed in the chamber, it would be too much for the pressure machine, with all the air in the form of the electrically with a solenoid.

THE RESULTS

Once we reached the end of the year, the first SSII buried problems with the valve. When we activated the solenoid that would release the pressure, nothing was happening. The quartz battery that we were using to activate the solenoid may have not been enough power to activate the solenoid at higher pressures. When we tested the solenoid it would fire at 20 PSI, and shoot a Ray, but once we put 40 PSI in the chamber the solenoid would not activate.

THE DOOPSIES

This Project had many copies. From PVC not being all the way pushed in, to Valves not firing as they should, other than a run at 20 PSI, this Project was riddled with mistakes. Most of the mistakes we learned from. We were really not even involved. We are going to highlight some of our major mistakes. Probably the biggest copse was when Sydney dropped her air cannon, and the PVC cracked. We had to remake the bulk of it because it was already cemented. Luckily, it occurred in the middle, so we didn't have to remake the whole thing. Our second biggest mistake was the trigger. The trigger was supposed to be a checkered bit that would work, so the sprinker would work more, and we had to buy more. Luckily, we had just enough budget left.

THE PROCESS

The process ended up taking longer than we thought it would. It took a while to calculate the parts and volume. Originally, we thought we were going to finish early and were excited to get out there with all the other students and cannons, but we not the case, in beginning, we thought we would actually be the first to assemble, but after assembling the air cannon and testing, the valve, annoyingly, would not work. ~~After that we~~ ~~we~~ know how a sprinter does work, read here, instead of doing these, all at once.

THE CONCLUSION

CONCLUSION

Although this was a Project full
as many fails and few successes,
it was very Fun. If we continued
doing this Project, We would test
it with more voltage, and get to
work more consistently. If we did
this project over again, we would
make sure the pieces worked and
voltage before modifying them, and
and putting everything back in
connecting them together. We would
PVC connect them in place. Literally
(connect). Our favorite part
of the project was like shooting
we didn't.

Special
Mr. L

Special Mr. Smith for the 1964-65 season. Go to the bank and check out his project.

WHEN we started this IMP Project, we wanted to make a hair spray powered potato cannon. we realized that hair spray potato cannons are technically illegal. In order to not break the law by building an explosive device, we decided to make a pneumatic potato-launching catapult.

WHEN we started this IMP Project, we wanted to make a hair spray powder potato cannon. we realized that more research. cannons are technically illegal. In order to not break the law by building an explosive device, we decided to make a pneumatic air cannon with the spray potato-launching capabilities.

Since there is not much information online about pneumatic cannons, it was a bit tricky to find a plan to follow. After a bit of searching, we found a Youtube video titled "how to make a simple air cannon". It was not as simple as we first thought. Following this video, we assembled our cannons, out of PVC parts and Sprinkler Wires. Neither of us had any experience with PVC prior to this project. So we learned as we went.

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A Quick Note on how the Air cannon works

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THE PROCESS

The process ended up taking longer than we thought it would. It took a while to order the PVC parts and valves. Originally, we thought we were going to finish a early and have time to test and make sure all the iterations of the cannon, this was not the case. In the beginning, we thought we would activate the valve manually, but after assembling the air cannon and testing, the valve. Annoyingly, would not work. ~~(I don't know)~~ know how a sprinkler valve works. Read here. Instead

of doing that, all of the air was coming out of the blower, and none was coming out of the valve. We bought new valves, and activated them electronically, like they were intended to do.

THE CONCLUSION

Although this was a project full of many fails and few successes, it was very fun. If we continued doing this project, we would test it with more voltage, and get to work more consistently. If we did this project over again, we would make sure the pieces worked individually before modifying them too much and putting them together, literally cementing them in place (good ol' PVC cement). Our favorite part of this project was testing (cause who doesn't like shooting marshmallows).

Special thanks to our mentor Mr. Josh, and our Net-Mentor, Mr. Adam for helping us along the way. Shout-out to Ben D for helping us to reach our budget. Go check out his project!

TS

trying
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make
the
cannon
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better
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and biggest
& cheating
we had

